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BETT Preview 2013

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The BETT Show 2013

A preview of new technologies
and ICT solutions for schools

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Setting the scene for the UK's biggest education show

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Editor's letter

School spending on ICT continues to reach new heights and it is not difficult to see why with BETT 2013 hosting over 650 exhibitors of innovative products and services designed for the education sector. Spending also reflects the increasing sophistication of many schools in their use of ICT for teaching and learning, professional development, school efficiency and community projects. But it is not all plain sailing, with schools facing concerns such as changes to the national curriculum, how ICT should be taught at secondary level, the benefits of embedding ICT across schools and, despite significant investments in ICT, ongoing budget and resource constraints.

A lack of central government guidance on the use of ICT in education and the demise of local authority advice and support, means many schools rely on events such as BETT and brands such as *ICT for Education* – which includes a national conference programme and online magazines and newsletters – to gather knowledge and expertise they can employ in classrooms and share both inside and outside the realms of their own schools.

Visitors to BETT 2013 will be able to collect information on products and services they are considering for their schools, try out innovative products that may not be on their shopping lists, and gain inspiration from the many teachers and independent education consultants who will share their experiences and opinions during the show's Learn Live workshops and seminars, the School Leaders Summit and in the BETT Arena – a first at the show following its move this year to the ExCel exhibition centre.

Whether you are visiting BETT with a plan of action, or looking for inspiration, this *ICT for Education* BETT preview covers some of the issues and opportunities you can explore at the show, as well as technologies that are gaining popularity and proving successful at schools and academies across the UK.

Best Regards,

Sarah Underwood Editor

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CONSTANT BRILLIANCE



BETT 2013 show preview

Now in its 29th year, BETT offers a wide range of innovative ICT solutions for schools covering everything from the latest handheld devices and tablet computers to digital content, management information systems and cloud technologies

Sarah Underwood

BETT 2013 is bigger than ever, with more than 650 exhibitors showcasing ICT products and services designed to support teaching and learning, improve school management and extend communication between parents and schools. Some of the products are new, others are tried and tested, but they will all be under the scrutiny of increasingly savvy purchasers intent on choosing and investing in technologies that will provide a real return on investment for their schools.

As in previous years, key themes are emerging at this year's BETT, reflecting an increasingly mature market that is procuring not only education-specific products and services, but also business solutions such as networks and cloud options that fulfil the aim of creating holistic, yet best-of-breed, ICT environments.

Mobile devices

Tablets, laptops and notebooks are gaining traction as schools and academies realise the benefits of any time, anywhere mobile technologies and the ability to use mobile devices, particularly tablets, in both one-to-one and bring-your-own-device schemes. They do require infrastructure, such as broadband, Wi-Fi networks, management software and security systems to be effective learning devices, but with these in place mobile devices offer endless possibilities for teaching and learning. Vendors of traditional desktop



computers, as well as new market entrants, are populating the mobile computing market with an aim to gain a share of the education sector's ICT spend. Apple, HP, Dell and Acer are among the big payers that will show new tablet products at BETT, while smaller specialist providers include Avantis with LearnPad and Ergo Computing with the Ergo Hybrid range of Windows 8 compatible tablets.

The interactive, touch sensitive nature of many tablet and mobile devices is well suited to primary school applications and is being adopted by suppliers of laptop and desktop computers although prices will remain high for these touch screen computers until they become commodities and the competition heats up.

Smart Technologies, a pioneer of interactive whiteboards, takes interactive technology a step forward this year with the LightRaise interactive projector that creates a touch enabled interactive learning space that allows

two students to collaborate with either fingers or pens. The projector comes with Smart Notebook learning software and access to the Smart Exchange website of digital resources.

Learning platforms

Learning platforms continue to be popular choices, in part because they can provide a whole-school ICT solution including administration functionality, learning provision, assessment and reporting.

Frog, a provider of secondary school learning platforms, will be playing into the move to mobile devices at BETT with a new operating system for its products that is compatible with the Apple and Android operating systems and has been built specifically to support tablet devices. Teachers will be able to create interactive resources remotely using an iPad or Android device. Frog will also debut frog.me, a free of charge online system that records key stages of educational



development from primary to higher education.

Content platforms to look out for at the show include MediaCore and ClickView. MediaCore will showcase its new cloud-based video publishing and management platform that allows schools to create video content using standard video recorders and upload it via the company's iOS app for iPhones, iPads and the iPod Touch. Content can then be accessed from any mobile device or PC.

ClickView adds Media Store to its wide range of video resources and delivery mechanisms. The product is a web-based platform where ClickView users can purchase video content from leading providers, such as National Geographic and Getty Images, that has been hand-picked by the company for its quality and educational purposes.

Projectors and printers

Projector technology has developed quickly over the past few years, with companies such as Epson, Casio, Sony and Ricoh making technologies that were often too expensive for schools more affordable and bringing 3D images into the classroom, a boon for subjects such as biology and geography. Epson provides an example at this year's BETT with a cost effective 3D passive projector that can be used with low cost 3D glasses. The company will also demonstrate a new series of high-brightness projectors designed to deliver presentation in large spaces such as school halls.

As printer technology has developed, the issue of managing printers and their consumables has remained

top of schools' agendas. All the big printer players, such as Brother, Oki and Epson, will be at the show with options that meet the requirements of all sorts of schools. Epson has a new Print and Save service package to help schools cut costs, while Brother will be displaying its b-guard print management software for fleets of printers and a managed print service for schools, a frequently favoured option that can cut the cost, time and frustration of printing worksheets, homework, school communications and more.

Brother will also demonstrate the J4000 range of printers that features a swipe touch screen and A3 landscape printing, which is great for classroom displays and posters, as well as standalone desktop and mobile scanner devices that can be used to digitise documents such as classroom assignments or administration forms.

Cloud computing

As in business, cloud computing is making ground in, allowing schools to access applications and data held in supplier cloud solutions as and when they want to. The technology offers advantages in terms of ease and reduced IT overheads and support requirements, and can be useful in small schools with limited IT resources and large schools and academy groups that are heavy users of ICT and producers of large volumes of data.

Among the many cloud solution providers at BETT are European Electronique and Redstor. European Electronique will introduce its Freedom cloud solution that raises the concept

of an onsite client server model into the cloud leaving the school to concentrate on teaching and learning. The company says cloud computing is particularly advantageous for schools that want to get going with ICT quickly, or even free schools that want to provision ICT before they have secured a location. It then provides benefits of scale and a regular ongoing cost rather than large upfront capital expenditure.

Cloud backup and storage services specialist Redstor will showcase Centrastor, a cloud-based service for schools that tackles the issues of bring your own devices by providing a safe and secure cloud-based platform for schools to store and share documents. The solution also allows education professionals to share data and collaborate, and enables school IT administrators to take control of sensitive school data and administer how it is shared both internally and externally. Redstor offers both a full and hybrid cloud service, with Centrastor including the option of a local network store and support for existing network storage devices and file servers.

Applications

Last but not least, BETT will host hundreds of providers of applications suitable for primary and secondary schools, as well as MIS suppliers such as Capita and RM Education that will showcase both school management and teaching and learning tools.

Microsoft will be encouraging visitors to try out its top six Windows 8 apps for education, while classroom favourites from the likes of EducationCity, 2Simple, Espresso, Mathletics, Sherston and Just2Easy will all be on show. Groupcall, Teachers2Parents and ParentMail will demonstrate solutions that replace the paper trail of school to parent communication, while both niche software companies and large MIS vendors will be on hand to demonstrate the benefits of learning assessment tools.

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The leading role

As schools continue to seek clarity about technology, trends and impact, leaders need to focus on key strategies that exploit technology for the benefit of learners, teachers, schools and the wider community

Mike Briscoe

As BETT 2013 approaches schools are still finding that the lack of clarity around direction, curriculum focus, funding and priorities poses real challenges. We are seeing the continuing demise of local authority teams, the disappearance of direct and indirect funding, few announcements or sources of guidance from central government and an education technology market that is also looking for direction.

Many learners are now able to access technologies more easily, more frequently and with greater sophistication, yet for many school leaders, decisions about how to prioritise technology in school, determine technical strategies, release funding and exploit existing technologies has been delayed in the hope that other priorities will diminish or clear guidance will be forthcoming.

Technology, well implemented and supported, makes a significant difference to our young people. It can improve their learning and broader skills, deliver new learning approaches, support teaching and ease the efficiency of schools. It is reassuring to see schools recognising the real value of technology to improve learning, improve efficiency and extend their reach to parents and the wider community. Schools want to bridge the gap between the level and type of access to technology learners have in school and the experiences they have out of school, and they want staff and parents to have the necessary tools to maximise learner opportunities.

New devices, new modes of communication, new MIS approaches, new software, new applications, new support offerings and new claims of impact will be promoted, celebrated and pushed at BETT 2013. The challenge for our leaders in schools is to determine how they consider such developments and the critical issues on which to focus.

In my work with schools and in particular with school leaders, I am always drawn to two simple questions:

- What are the critical areas that need to be considered?
- What will be the impact of these technologies?

As always, the questions are simple, but finding the answers needs more thought and investigation.

Constants

I have been privileged to work with thousands of school leaders across the country over nearly 40 years. In that time, technologies have come, grown, shrunk, accelerated, failed and astonished. What has been clear is that there are constants, or critical areas that need attention regardless of the advancement of technology, the quality of support, or political imperatives.

School leaders visiting BETT 2013 will have particular topics of interest to consider, but I would strongly advise them to consider these constants and also their approach to determining their strategy for technology in school. In developing the EXite programme and its work with leaders in schools, we have identified a common set of

nine critical leadership issues. These are used to form the core content and support resources of the programme.

- In question form they are:
- Are we really aware of new technologies and implications for learners?
- Have we considered the impact and potential of technology in teaching and learning beyond motivation?
- Do we equip our young people to manage and exploit technology when they leave us?
- How much do we exploit technology to improve engagement beyond the school?
- Can we say we do enough to ensure our learners are e—safe and aware?
- Is our provision of technology well managed, planned, supported and appropriate?
- How well do we use data to support learning (and as an administrative tool)?
- Do we make sure we get best value, understand costs and are efficient?

The final critical issue is, perhaps, the one most overlooked and potentially most important:

- Do we have a clear strategy and approach to technology in school and do we, as a leadership team, lead by our own actions and behaviours? And what do we need to help us develop our thinking?

Critical attention

It is easy to produce lists and bullet points, but there are compelling arguments that technology transforms

learning, engagement and efficiency. This means it deserves critical and careful attention. Young people need to be equipped with knowledge, skills, understanding and competence in the use of technology. Our education workforce deserves the technology that befits a respected profession and it should be confident and competent in exploiting technology to support learners. Schools need effective, efficient and economically viable technology to support the workforce, learners and those beyond the school.

Having witnessed the reduction in support, funding and focus for ICT, help for school leaders is more important now than ever before and we must be careful not to lose the gains already made from technology and the potential it has to offer. It is critically important that school leaders take time to reflect, understand key ICT issues and discuss with each other approaches that may work before developing their own strategies.

Equipping yourself and fellow leaders

Many years after its demise, I still hear colleagues in schools speaking fondly of the Strategic Leadership of Information and Communication Technology, or SLICT, programme, of how it opened eyes and made connections, how it focused on impact and not technology, and how it set schools off on the ICT journey. I now hear schools are at a crossroads. The time has come for another leadership focus on ICT.

Leading schools is a complex yet rewarding role: technology is complicated yet also offers tremendous potential. But what is available to help you take a leadership role and exploit the technology?

I have no hesitation in pointing you to the EXite programme, endorsed by and made available to schools in association with the Association of School and College Leaders, Independent Academies Association, National Association of Head



EXite – Exploiting Information Technology in Education – is a programme designed and led by the original directors of the successful SLICT programme and has been developed in partnership with the Independent Academies Association and with the backing of the Association of School and College Leaders, National Association of Head Teachers and Specialist Schools and Academies Trust.

Focused on improving learning and teaching, and raising standards, EXite is a 10 to 12 week programme that incorporates issues such as ensuring a return on investment, gaining value from ICT and exploiting technology in schools, academies or groups of academies.

The programme equips members of the leadership team with the ability to make informed decisions about technology. Starting with a face-to-face launch day, leaders learn alongside other leaders, receive high quality support and, in their own time, access online modules to help them develop their own approach for their school, academy or academies.

To find out more about this innovative programme visit <http://www.exite.org.uk>, or go straight to the registration page at <http://www.exite.org.uk/bookings>

Teachers and Specialist Schools and Academies Trust. Developed for leaders at all levels in schools, piloted through dedicated programmes in primary schools, secondary schools and academies, and designed and driven by the national directors of the acclaimed SLICT programme, EXite will support you in developing your own strategy and approaches and help you address the nine critical leadership issues.

Mike Briscoe is a director at IET Associates, a not-for-profit company advising on the effective use of technology solutions in education. He is also a co-director of EXite. At the BETT Leaders Summit, seminars hosted by school leaders will demonstrate the impact and importance of the EXite programme and address key issues. Mike and EXite co-director Hannah Jones will present at the Leaders Summit.

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Let's knIT

This will have you in stitches . . .

Steve Bunce

"My name's Steve and I'm a knitter." I said this to a group of teachers, who looked at me strangely. "Really?" they questioned. "Yes," I said, "And I think there's a link between knitting and computer programming." So, how did this all start? Let me spin you a yarn...

A year ago, my great uncle Norman came to visit. He had worked for the Inland Revenue in Scotland back in the 1950s and while he went around the isles, he learnt Gaelic, songs, stories and traditional crafts. This experience was going to take him all over the world. He taught me about knitting, how important it was for communities in the isles. Also, how men and women all knitted out of necessity, rather than as a hobby. He told me of the fishermen's Ganseys, thick sweaters worn by the fishermen on the boats. Each village had a different pattern, so in the sad event of a man overboard, the body could be identified.

Talking with my great uncle, I realised how teaching knitting would be great in schools. For example, it would develop the physical benefits of finger strength, coordination and dexterity. It would also develop language skills like instructional writing, speaking and listening, and social skills of collaboration and communication. It could support links with school communities too, as the children could interview their relatives about their knitting experiences. So, in Summer 2011, I cast on!

Much ado about knitting

Knitting isn't easy. At first, I tried using knitting books. Even though the pictures were clear with detailed written



instructions, I couldn't understand properly. Further help was found online. YouTube is an amazing resource, not only were there hundreds of knitting enthusiasts keen to share, but also yarn companies helping beginners to learn using, by way of example, the Lion Brand YouTube Channel. What an opportunity for our children? They could not only learn from videos, but create their own to teach others.

Looking for other supporters, I came across Craft Club, a national campaign to develop craft in schools, a great initiative from the Crafts Council and other partners. The club supports schools to find volunteers to share their expertise. Hand knitting enables the children to begin to learn sequences of instructions, without the complication of needles, and progress is easily seen. You'll find an example in the links box

(opposite).

Some school knitting clubs were already established. Many children have encountered knitting in school, but few could remember how to do it. Those children who were able to knit were generally taught by a grandparent. It seemed they had an emotional bond, but their instructor had taught them on a one-to-one level and persevered with them to help them. Solving problems and learning together had made a lasting impression.

And on to programming

How are children currently learning to program in primary schools? The BeeBot is popular for inputting instructions to move the brightly coloured robot around the floor. Recently released are two BeeBot apps for the iPhone and iPad that

Links for learning

Lion Brand YouTube

<http://www.youtube.com/user/lionbrand yarn>

Craft Club hand knitting example

http://www.craftclub.org.uk/video/featured/finger_knitting_instructional_video

BeeBot app

<http://www.tts-group.co.uk/shops/tts/content/view.aspx?cref=PSGEN2293277>

Scratch suggested curriculum

<http://scratched.media.mit.edu/resources/scratch-curriculum-guide-draft>

Crystal Channel from Planet Sherston

<http://sherston.com/crystal/>

Lego WeDo

<http://education.lego.com/>

Scratch

<http://scratch.mit.edu/>

Scratch and Lego WeDo

<http://info.scratch.mit.edu/WeDo>

Craft Club

<http://www.craftclub.org.uk>



encourage children to instruct a virtual BeeBot through many fun games.

The Crystal Channel, from Planet Sherston, has many high-quality resources to teach sequencing instructions. These include The Crystal Rainforest, Flobot and Mission Control 2. The children I observed loved following the stories while developing their instructional skills, for example programming a drinks machine to deliver the perfect drink.

Lego WeDo provides children with a simple interface to control familiar Lego models. The supporting videos help them to build and program a variety of interesting projects. Similarly, Scratch teaches programming by using blocks of instructions to create the programs. Children are encouraged to share their creations back on the community website. A new web version, Scratch 2.0, is due for release early this year.

Tying up loose ends

So, what is the analogy between knitting and programming? Stitching all together, let's consider three ideas:

- User experience – people knit for a purpose, with a person and their own requirements in mind, such as size, colours, patterns and materials. This is the same as programming, where a program needs to meet the requirements of the user.

- Knitting follows a sequence of instructions – most people will say 'knit one, purl one' if you mention knitting. These are the instructions following a syntax (vocabulary), including variables, loops and decisions (If...then...else). For example, if you need to knit 50 rows, you will knit one row at a time until you reach row 50. Therefore, the program could be, 'If row is 50 then stop, else keep knitting.'
- Finally, when you make a mistake you need to fix it – this is debugging the program. As I've learned to knit, I've made many mistakes. Each time, the stitches have to be undone and replaced. Debugging programs is not only necessary, but also difficult. Both knitting and programming require perseverance and struggling with problems.

To infin-knity and beyarned

When this all started, I thought knitting could help social skills, technology could help capture disappearing skills and learners would be enabled to learn to knit. In seeing similarities between knitting and programming, future programmers need to start young. So, what next? Children love the idea of becoming hackers, or mischievous programmers, and the knitting analogy continues there too. Try searching online for 'Yarn bombers' or 'Guerrilla knitting' – they've got it covered.

Steve Bunce is an independent consultant. At BETT, Steve will present with Zoe Ball on 'Knitting and thimbles – learning to program practically.'

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Making maths fun

ICT can support the learning of mathematics in many ways that are both educational and entertaining

Richard Smith

ICT has a key role to play in mathematical education in 2013. The nature of ICT means students can explore, play, compete and collaborate, developing the confidence required to be good mathematicians. Following are some ideas that can extend and enhance learning.

Screencasting

Instead of writing on paper, students can explain things by creating text and diagrams on a tablet computer. As the students create digital images with their fingers on the screens, software records their accompanying oral explanations. Background music can be added to make the creation more engaging and professional. The presentation can then either be saved locally or shared with the world via social media.

I have worked with hundreds of students and teachers using this technique over the past 12 months and have observed the development of both mathematical understanding and key vocabulary. For example, a year four student created a screencast linked to methods of multiplication. It was shared publicly on twitter and within 10 minutes the father of the student tweeted that he was proud of his son's work. Use of this technology can be enhanced further by embedding screencasts onto a website, blog or virtual learning environment. An example of this can be seen at www.amazingict.co.uk/maths.

A school in Telford has created its own screencast channel using the free app showme, www.showme.com. Two year four teachers are easily able to delete any screencasts that convey misleading information, leaving



a range of resources accessible to parents, students and other staff. Another free app is Doceri, www.doceri.com. This allows audio for the screencast to be rerecorded if mistakes are made first time around.

Images

When students come in to the classroom it can be useful to have a large image projected to grab attention and encourage discussion. The easiest way to do this is to use the home screen of the Microsoft search engine Bing, www.bing.com. You can scroll through images from the previous week to find an image that relates to maths. Counting, grouping, symmetry, 2D and 3D shapes can be easily spotted as stimuli for learning and as a method of reinforcing vocabulary in a low key, but effective way.

An easy way to show a range of images linked to a topic is by using a website called Taggalaxy, www.taggalaxy.de, which automatically searches images from the collaborative photo sharing site Flickr and then displays the images as a planet. You must check content before presenting it to children as the images chosen

are from a site that uses photographs taken by individuals across the world.

My favourite way of sharing photos, drawings and students' work is by taking a photo on my phone and then emailing it via a dedicated email address to an online storage site such as Flickr. These pictures can then be shared with the world by adding a widget to your website which automatically displays the pictures that have been taken. Clearly, you must keep the email address secret or anyone will be able to send pictures to the website. It is also important to remember to take photos over students' shoulders so that they are not readily recognisable.

Computer games

Games have moved forward a long way during the past few years. One of the most successful games I have used in schools is Mathletics, www.mathletics.co.uk. Students can compete with others around the world on a range of numeracy tasks. Once the task has been selected, three other students who have chosen the same task begin together in a race through the questions. The competitive element makes repetitive tasks such as practicing multiplication more engaging. As students develop new skills they are rewarded with gold bars and points that enable them to enhance their personal avatar.

This concept of an avatar that represents the user is popular in many gaming environments and is a well-proven method of motivating students and encouraging them to log on regularly. Mathletics is a subscription site with students having their own logon to provide a safe, managed

network. Other online games I have found to be effective in providing students with a platform to practice skills and explore new content are Mangahigh, www.mangahigh.com, Sumdog, www.sumdog.com, and Educationcity, www.educationcity.com.

Blogging

The use of blogs, in which teachers and students post content online for an audience to read and comment on, is now common in schools. Over the past six months, I have been setting up a weekly blog post based on a request from a school to help students solve word-based maths problems and promote writing projects. The content of the blog has developed steadily with posts being added from both PCs and iPads using the blogging site www.j2webby.com.

Images, such as maps, drink cartons and 3D shapes are used to support problem solving activities. Mathematical vocabulary is reinforced as students must read extensively to be able to solve the problems.

Feedback has been very encouraging. Bromley Jones, headteacher of Randlay School, states: "We asked Richard, as part of an internal school programme, to get children writing by developing and promoting blogging with some of our reluctant writers. He has done this with great success and the programme has had an extremely positive impact on the children and school staff."

Schools that use blogs regularly are encouraged to link up with three other schools across the world. Over the past 12 months, 100,000 pupils have been involved in QuadBlogging from 3,000 classes in 40 countries. Details can be found at <http://quadblogging.net>. If you are interested in setting up your own blog you can either download a self-hosted blogging tool, such as www.wordpress.org, or use an existing structure already set up by educational companies such as www.J2e.com or <http://primaryblogger.co.uk>.

Immersive spaces

An immersive space is either an existing classroom or a redesigned space that features a range of different stimuli. Typically, these spaces include projectors to provide images or video, speakers for audio, objects that link to the project and digital devices that can be explored. In addition, changes of temperature and the use of different smells can make the learning experience memorable and easier to recall in future.

In November 2012, I spent two days in a special school in Telford working in a hemisphere fitted with a 360 degree projection system. I helped the students to imagine travelling to the bottom of the sea inside a small yellow submarine and ways of navigating the solar system in a space craft. The learning involved thinking about distances, speeds, size and magnitude. The dome and content were provided by Igloo in Education, www.iglooineducation.com. We also used a free iPad app called Tick Bait's Universe. This was installed on all the tablet devices to allow students to explore a model of our universe independently, www.youuapps.com.

Virtual worlds

It is worth exploring how you can link the development of maths activities and mathematical vocabulary through the use of 2D and 3D environments. The free graphical programming language Scratch, <http://scratch.mit.edu>, can be used with students as young as seven. It is useful for students to know that the width of the games window is 400 units and the height is 250 as this enables them to scale movements. For example, four repeats of 100 units will allow movement across the whole window. The topic of coordinates can be introduced by referring to the origin of (0,0) and then programming the sprite to move to points with other coordinates.

2Simple's 2DIY3D allows users to create their own game maze to explore. This is produced by using a 2D view and is then explored in 3D. It provides the opportunity for discussion of positioning, size and direction of movement. As well as being creative it is great fun to play. Schools that subscribe to Purplemash can give students access from both in school and at home, www.purplemash.com.

The free download Sketchup 8 can be invaluable for the creation of 3D objects and buildings, www.sketchup.com. It enables curriculum links to be made between maths, design and technology, and geography. It provides students with opportunities to explore different views, scale, shape, measurement and ratio. Even if these terms are not specifically named, students are practically considering their application. The use of Sketchup 8 is particularly effective when working with students who struggle to create 3D images on paper. Sketchup allows not only the creation of a 3D object, but also movement around the object and viewing in to the object through the addition of translucent windows. Objects created can be exported and opened and manipulated in Google Earth or in the interactive whiteboard software SMART Notebook 11, <http://smarttech.com/gb>.

These are just a few examples of how ICT can support the learning of mathematics. In my experience, students are willing not only to explore the subject, but also to extend their understanding if provided with the appropriate software and hardware.

Richard Smith has taught mathematics for over 20 years. In 2011, he started his own company, AmazingICT. He is also education director at Igloo in Education. At BETT, Richard will present '10 practical ideas for using ICT to support the learning of mathematics.'

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The app generation

App (*noun*) – A self-contained program or piece of software designed to fulfil a particular purpose; an application (Oxford English Dictionary)

Tim Handley

The number of mobile device and web-based applications, or apps, has surged over the past couple of years. Many of us have a smartphone or tablet and these devices are becoming increasingly common in schools. There are also plenty of web apps that can be accessed on practically any web-enabled device, including desktops and laptops, so it is no surprise that an increasing number of teachers are starting to exploit the power of apps.

The children we teach are natives to this technology. I like to think of them as the app generation. Apps are nothing new to them and they are growing up in a world that many predict will be increasingly powered by apps. The vast majority of children we teach will own an app-based mobile device. Bayleigh, aged 10, says: "We use apps all the time on our iPod Touches and phones at home, so it makes sense for teachers to use them to help us learn."

Apps are often very simple to use, but despite this, are often extremely powerful tools. Adam, aged eight, explains: "It is dead easy to do things on apps, like put together a movie, or create a digital poster that would take me ages to do on proper computer programs." Give a children a new app and they will soon become experts, often within minutes.

Children also enjoy using apps in school and they can be a powerful tool to engage children in learning. Isobel, aged 11, comments: "Children love using apps in school, especially on mobile devices. They make learning so much more fun and allow us to do things that wouldn't have been possible before."

Apps are free

Mobile device and web-based apps are, for the most part, either free, or at worst, very cheap, especially when compared to their desktop counterparts. On top of this, nearly all apps offer free updates, enabling you to have the latest version of the application. Pretty much most functions performed on a computer can be accomplished using a device or web-based app. This means an you will find an increasing number of schools with no traditional software beyond the operating system installed on their computers.

The possibilities of what can be achieved in schools through the use of apps are practically endless. A group of children share their top 10 apps with you at the end of this article. During our Learn LIVE session at BETT, the children will share how apps can be used to develop specific skills, how they can be used to present work in creative ways, how they can be a powerful tool in recording learning, and how they can be used for greater learner interaction and to help children replay key teaching moments.

When combining the use of different apps, their power only increases. For example, last term we ran a fully functioning news room in year five using apps on our tablets that allowed us to create a constantly updating news website, <http://bit.ly/woodlandsnews>.

Homely apps

I think apps really come into their own when you exploit their potential to build home-school links and enable more meaningful work to be completed at home. Most blogging platforms have apps for mobile devices, which makes

blogging about work completed in school even easier and accessible to children than before. Photographs of that super piece of writing, maths or other piece of work can be uploaded and, using apps such as Vimeo, Audiboo and Soundcloud, sound and video files can be captured, making sharing learning in school with the wider world, quite literally, child's play.

Many headteachers are starting to exploit this ease of use by creating 'well done' blogs, showcasing to the world work that has been sent to them for a headteacher award, <http://bit.ly/appypraise1> and <http://bit.ly/appraise2> provide examples. Paul Shanks, headteacher of Gaywood Community Primary School says: "Using apps such as Wordpress, Vimeo and Audioboo means we can share children's work more readily with parents and carers. The praise and class blogs can be updated immediately, with parents often aware of children's achievement before the end of the school day. Twitter and Facebook integration enhance this further as we then have direct contact with the majority of parents and carers and can supply direct links to the blogs. The impact on learning has been significant as children are keen to be on the praise blog."

Great possibilities also exist if teachers begin to accept learning completed on apps at home, be they web based or device specific apps. Bayleigh says: "Apps are just another way for us to show our work." Apps can be seen by teachers as another, valuable way for children to share their learning with their teachers. For example, a simple request to research a forthcoming space topic

Children's top 10 apps

It is impossible to put these apps in order, but here are the children's top 10 for use in school. All comments on the apps are direct from the children who will be presenting at BETT.

iMovie (iOS)	"iMovie is great as it makes it really easy for me to create my own videos. This is a great way for us to share our learning and show what we have learnt. I also love creating trailers using iMovie, which is dead simple, but which people say look like they could be shown at the cinema!"
ActionMovie FX (iOS)	"I love this app as it makes great things happen in our videos, which makes them look like they are big films at the cinema. It's just a bit of fun really, but I think teachers could use it to get us writing some cool stories in English."
Mr Thrones SpellBook (iOS)	"This fun app will work for children from year one to year six and is a great way to practice spellings as it challenges you to unlock the safes. It's much more fun than normal spelling practice."
School Writing (iOS)	"This app can help children improve their handwriting as it gives feedback after each letter or word about how neatly you have written it. It makes handwriting practice more fun and is really good when used with a stylus."
Super7 (iOS)	"I like this app as it gets you to practice your mental addition and problem solving. Even though you only have to make seven each time it is good practice and stretches your maths brain."
Operation Math (iOS, Android)	"I love Operation Math as it turns mental maths into a fun game. It's quite difficult in parts and you have to be quick, so I think I learn lots from playing it."
Sumopaint (iOS, Android, web)	"I love creating masterpieces using Sumopaint. The 3D effects are especially cool and I like being able to play around with images I have found or have made myself."
BeFunky (iOS, Android, web)	"We like BeFunky as it makes it easy to add really cool, and sometimes very silly, effects to photographs that we have taken. This can help make our presentations and other work even better!"
PicCollage (iOS, Android)	"PicCollage is great as it allows you to put together lots of pictures with text on one big picture or poster."
BrainPop UK (iOS, Android, web)	"We love Tim and Moby from BrainPop UK. The app is great as it allows you to access all of the movies and do the quizzes. Even if your school doesn't subscribe to BrainPop there are lots of super useful free movies, including the movie of the day."

can turn into information videos, <http://bit.ly/appyspace>, or learning from a school trip can turn into a cartoon, <http://bit.ly/appytrip>, all using the power of simple to use apps.

App creators

It is now possible for children, and indeed teachers, to easily create their own apps. There are an increasing number of services that allow you to create apps that can be accessed as web apps on any mobile device, or, for a fee, be published as real apps to app

stores.

The children's favourite tool creating apps is AppShed, www.appshed.com. Adam explains: "It's quite easy to create your own app on AppShed. You do need to think carefully about how you want your app to work and what needs to go where, but when you've done that creating the app is easy." Apps have been created by children from year three upwards and the pleasure of seeing their own creations being available as web apps on anyone's mobile device is great to see.

Apps are on the rise and the potential they have to transform learning cannot be ignored, the only question remaining is how will you use apps in your school?

Tim Handley is a year five teacher and ICT lead at Woodlands Primary School, Bradwell, Great Yarmouth. At BETT, Tim and a group of children will present 'Let's get 'appy - how the app generation can use apps to enhance, extend and motivate learning.'



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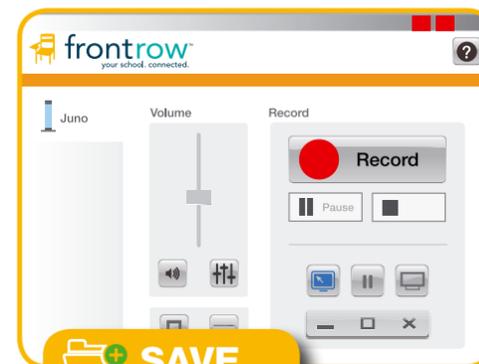
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It's Learning	E280
ITSAC - LingApps	B102
ITWorx	F260
Jabbla	B112
Jadu	F339
JD Booster Maths	B368
JellyJames Publishing	A150
Jeulin	F58
Jiangsu SWR S&T Co., Ltd.	A190
Jolly Learning Ltd	F370
Joskos Solutions	B270
Just2easy.com	D1
Karin Ohlis Firma	B128
KCC Commercial Services	F289
Keep I.T. Easy	F359
Keep IT Secure Limited	G200/201
Ken-a-vision International GmbH	B300
Kensington	F330A
Kite Learning	E270
Korea Digital Co.ltd	G335
Krcs Group Ltd	F54
Kudlian Software	E95
Kyocera Mita (UK) Ltd	F336
LAIN Laboratory	G285
LAN2LAN Ltd.	B353
Lanaco	C338
Langeroo	A6
Languagenut ltd	F309
Lapsafe	F130
Lapsafe Products	F130
LaraMera (Program AB)	C136
Lawford Education Ltd	C140
LCF UK Ltd	D356

Exhibitor Name	Stand
learnirect Limited	C352
Learning Possibilites Ltd	F271
Learning Resources	F254
Learning Spaces	F102
Leba Innovation	F84
Lego Company Ltd (Lego Education)	C152
LEGO Education Europe Ltd	C148
LEGO Education Europe Ltd	C152
Lenovo (France) SAS	F140
LEXIA UK LTD	B124
Lightspeed Technologies Inc	A100
Linguascope	F2
Little Bridge	D190
Little Bridge Limited	E190
Little Bridge Limited	D190
Little Dreams Ltd	G210
Live Register Ltd	F240
Livescribe	F86
LJ Create/ Nelson Thornes	B242
Logical Choice Technologies	B354
Logon Computing Ltd	F244
London Grid for Learning	F120
Loxit Limited	C102
Lucas Nuelle	C51
Luidia UK Ltd	B60
Luidia UK Ltd.	B60
Lumens Digital Optics Inc	F91
Lynx Networks	F231
M247	F40
M2Desk	F67
Macmillan Education	B56
Magic Whiteboard	B222
Mango Marketing	-
Mantra Lingua	C20
Matchware Ltd	C100
Mathematics.com.au Pty Ltd	G10
Maths for More	C6
Matrix Multimedia	B3A
MediaCore	F319
Mend IT Recycle IT	C322
Meraki Inc.	C333
Meru Networks	F325
Mexus Education	F264
Micro Librarian Systems	F230
Microlink pc (uk) Ltd	B110
Microsoft	E270
Microsoft	D270
Mikroværkstedet	C132
Mindsets (UK) Ltd	G54
Ministry of Education of United Arab Emirates	F350
Misco UK	C300

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Mizaru Media Ltd	A190
Modern Communications Ltd	C347
Monacor International	B344E
Monarch Education Furniture Ltd	F42
Moodle (Synergy Learning)	C1
MRG Systems Ltd	B332
MV-Nordic	C132
MXSweep	B331
My Learning (UK) Ltd	F337
Nanjing Universal Networks Co., Ltd	B180
NASUWT	B108
National STEM Centre	C368
Nationwide Retail Systems	C337
Natur & Kultur	G310
Ncomputing Inc	F108
NEC Display Solutions	B182
Nelson Thornes	B242
Netcomm Technologies Limited	B32
Net-ctrl Limited	D55
Netex Knowledge Factory S.L.	G270
Netop Tech Ltd	F284
Netsupport Ltd	C212
Netsweeper Inc	F120
Network and Cabling Solutions	B100
NeuLog	D10
Neuron Learning	D360
Newell Rubbermaid Belgium NV	E120
Newton Resources	A4
Nimero	C22
Norseman Direct	A356
NS Optimum Ltd	B96
Numbergym Software	B362
Oakford Technology	G44
OCR (Oxford Cambridge and RSA Examinations)	B240
Oddizzi	C5
OM Interactive Ltd	B144
Ombea	B364
Omnisoft Services	C366
Onelan Limited	G40
Onilo LLC	F372
Ontec International Ltd	B50
Optelec Ltd	C123
Orange Music Electronic Co. Ltd	B346D
Ordnance Survey	D284
Oribi Ab	C134
Osborne Technologies Ltd	E90
Oxford University Press	C60
P Squared Ltd	F304
Panopto	F233
Paradigm Audio Visual Limited	E352
Parat GmbH + Co. KG	C24

Exhibitor Name	Stand
ParentMail	B192
ParentPay Limited	C339
Parotec Solutions UK Ltd	G200-201
Pasco Scientific	E40
Pathway Innovations and Technologies, Inc	C2
PC Werth Limited	G180
Pearson	C190
Pebble	B231
Phillips Displays	F187
PHYWE Systeme GmbH & Co KG	C52
Ping Pong AB	D364
Pitsco Education	B356
Planet Enterprises Ltd	B190
Plasq	F308
Playbrighter	A342
Playline Design Ltd	F04
Pling Toys Ltd	IN-6
Plingtoys	IN-6
Polyvision	C242
Positive Gaming BV	E321
Precedence Technologies Ltd	B234
Precor	D280
Pressmart Media Limited	G111
Primary Games Ltd	A246
Prime Principle	B210
PRM Green Technologies	F97
Promethean	C80
Promethean Limited	C80
Punnet	G276
Pupil Asset	D20
Pupil Reward Points	C140
Qloudy	F364
QOMO HiteVision	B40
Qwizdom	D40
RADECAL	F63
Radix Ltd	B320
Raintree Publishers	B10
Ramsac Limited	G82
Rapid Electronics Ltd	F250
Read Successfully Ltd	F356
Readspeaker	F340
realsmartcloud with Google Apps	C310
RealSound and Vision Ltd	F62
Redburn Solutions	E325
Redstor	A20
Reflective thinking Ltd	B221
Renaissance Learning	E210
Richmond Systems	D24
Ricoh UK Ltd- Supplies Division	B310
Riotouch	B11
Rising Stars UK	C284

Exhibitor Name	Stand
RM - Ranger	G165
RM Education	C170
RM Education	C160
Room Booking System Ltd	A180
Rosberg System SA	A358
Royal Society of Chemistry	G110
S. Rubinstein Educational Scientific Equipment	E300
Saak Digital SL	G76
Sam Learning Ltd	F270
Sanako	F08
Scalable Communications Plc	C42
ScholarPack	C3581
School Font	B128
School ict Services Ltd	IN-10
School website	
Schoolcomms	C330
Schools ICT	F277
Schoolwebsite.co.uk	C41
Securus Software Ltd	G130
Sedao Ltd	C283
Selectamark Security Systems Plc	A90
Sensory Guru	C116
Serco	D180
Serious Games Interactive	F329
SES (Scientific Educational Systems)	D10
Shanghai Easi Optical Technology Co.,Ltd	F107
Shanghai Lindge Software Co., Ltd	E356
Shen Zhen iBoard Technology	B326
Sherston Software	F310
Sherston Software Ltd, Exhibiting As TAG Learning	B180
Showbie Inc.	F272
Simplicity Energy Education	IN-2
Simply Lamps Ltd	A130
SISRA Online	F323
Skoogmusic	B129
Smart Assess Ltd	C310
Smart ed Services	B132
Smart Labs	F20
SMART Technologies	C240
SmartLabs Ltd	F1
Smoothwall Ltd	B290
Softex - Brazil IT	F02
Solar Ready Ltd	B286
Soleis AS	G220
Solutions House	B98
Sonifex	B4
Sonocent Ltd	G90
Spacekraft Ltd	C144
Spark-Space	B126
Speech Link Multimedia	B122
Steelcase Education Solutions	C242

Exhibitor Name	Stand
Steljes	B170
Steljes Limited	B170
Stinkyink	B350
Stone Computers	C70
Stop Motion Pro	G330
Stormfront Retail	B58
StoryPhones	G245
Studica Ltd (Europe)	A70
Studica Ltd (Europe)	A60
Studio Spares	G340
Sunflower Learning	B282
SUPERMEMO WORLD sp. z o.o.	D362
Switchshop Limited	G260
Synel Industries (uk) Ltd	F98
Talk Straight	D322
Talking Products Ltd	A353
Tandem Edicions	C3A
TAP&€it	B132
Target Tracker	B230
Tasc Software Solutions Ltd	B202
Teachers Media International	F264
Teachers2parents	B212
Teachers2parents	C146
TechHeads	C31
Technogym	D320
Techsoft UK Ltd	A320
Tecnilab SpA	G320
Televic Education	G100
Texthelp Systems Ltd	C104
The Day News Ltd	IN-4
Therapy Box	B140
Think Pink 4 Ink	B3
Tieto Sweden Healthcare & Welfare Ab	G156
Tilaaaryhma	F104
Timstar Laboratory Suppliers Ltd	A276
TLC	E324
TLC Education Group	E324
TMB Marketing & Communications	D120
TMB Marketing & Communications	D140
TOA Corporation (UK) Ltd	G20
TOPdesk UK Ltd	C26
TOP-TEC	C320
Toshiba Information Systems (UK) Ltd	C90
TRACEBoard	B340
Traka PLC	C236
Tribune Business Systems	F72
Tripleplay Services	F76
Triumph Board a s	B181
TTS Group Ltd	C150
Turning Technologies	B214
Twig World Ltd	B160

Exhibitor Name	Stand
TWK Media Ltd	IN-8
Ubiquitous Desktop Solutions	F289
Ubitrac	F371
Uc Solutions Ltd	F239
Uk 3b Scientific Ltd	G12
UK2U Education/Langeroo	A6
Uniservity	F100
Unistage	B360
Universal Didactics	G74
University of Cambridge ESOL Examinations	B240
University of Cambridge International Examinations	B240
University of Piraeus Research Center	E355
Urenco Ltd	E1
USB Flashdrive	B359
U-Touch Limited	E20
VeriCool Ltd	F44
Vernier Software / Ids	B224
Vertitech	F374
Vestel	B85
Videk Ltd	A160
Viglen Ltd	E140
Visionaid Technologies Ltd	C133
Visual Education Ltd	A170
Vivitek Corporation	B62
Vivo Rewards	C354
Wanin Educational Multimedia INC	B352
Water Audit Services Ltd	B346B
Weather Front Ltd	G120
Webanywhere Limited	F280
WebBased	A300
Weejot	F339
West Nottinghamshire College	B200
Westcoastcloud	E340
White Space Ltd (Wordshark) Ltd	C210
WhiteSmoke	C358F
Whizz Education	F300
Widget Software	B140
Wildknowledge	F375
Wisepay	A140
Wishtrac House Limited	B106
WJEC	F106
X6D LIMITED	B12
X6D LIMITED (XPAND)	B12
Xiamen Elex Electronics Technology & Development Co Ltd	C15
Xirrus	B324
Young Digital Planet Sa	B90
Zhejiang BCY Electronics Stock Co.,Ltd	B94
Ziptales Pty Ltd	F357
Zulogic Ltd	C112