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Themes	ICT, technology

# The Bring Your Own Device to School scheme

## Sandringham School

### Context

Sandringham School is a larger than average-sized secondary school located in the St. Albans district of Hertfordshire. The school has specialisms in art, science and is a Leading Edge school, gifted and talented lead school and holds International School status. As a designated outstanding school Sandringham leads on a number of key national programmes as a National Teaching School, and together with another local school runs the Alban Teaching School Alliance.

### Brief description

Through its research Sandringham School has adopted the term 'Blended Learning' to describe the 'best of both' approach which is promoted at the school. This is one of the school's strands of focus for teaching and learning. Blended Learning retains all the effective elements of traditional teacher-led classroom instruction with a focus upon written work, literacy, numeracy etc. and weaves in digital technologies, portable devices, online resources and collaborative learning.

Sandringham School has many years of experience in using mobile technologies in and around the classroom, having long used school-owned sets of iPads. The pilot of iPads in school from 2011 to 2013 resulted in over 3,000 hours of lessons being delivered using the devices across the key stages and subjects.

In 2014 Sandringham launched a Bring Your Own Device (BYOD) scheme across the school. The rationale behind implementing a BYOD scheme was to allow for a greater degree of personalisation and independence, to engage students and lessen their dependence on the teacher. The scheme is part of the school's wider plan to equip pupils with the tools to become 21st century learners. The BYOD trials were initially rolled out for year 7 in summer 2014 and later became a requirement for the whole of key stages 3 and 4 as per school policy from January 2014. All pupils in key stage 3 and key stage 4 now have portable devices, the majority of which are iPads or similar tablets, though some students have chosen to bring Chromebooks, hybrid tablets or ultraportable laptops. A large number of students in sixth form bring in a laptop to school, for use both in lessons and study areas.

## The Bring Your Own Device scheme

### The devices used

Through the BYOD scheme the devices used are chosen and owned by the student, the only stipulation from the school being that it needs to be a tablet device with a certain minimum specification. Therefore any learning activities utilising the devices would need to be platform agnostic and could not rely on, for example, iOS-only apps. However, there would be nothing stopping an individual student utilising a particular app for his or her own learning purposes, even if it were device specific.

Pupils in key stage 3 are recommended to use tablet devices and key stage 4 pupils are advised to use a tablet device or a laptop/netbook/ Chromebook device for specific needs. Typical devices that would be suitable for key stage 3 and 4 pupils would be any Apple iPad higher than version 1 (mini, 2, retina, air etc.) and popular Android tablets such as Google Nexus, Samsung Galaxy and Tesco Hudl. Some pupils have opted for Windows tablets (e.g. Acer Iconia Tab 8), Chromebooks or hybrid tablets with detachable keyboards. Currently having a device is optional for sixth formers but the school strongly recommends that they bring in a laptop or Chromebook device; almost any reasonably modern laptop will suffice. It was felt that laptops are more suited to the complexity and duration of activities in key stage 5. As part of the scheme teachers are also supplied with a tablet, and due to the school's experience with Apple devices, iPad Minis were selected.

The school does not consider a smartphone a suitable learning device due to the screen sizes being too small for pupils to use as eBooks, conduct research and complete presentations/essays on. Parents buying a device for their child were advised on a suitable screen size, disk size, and other minimum requirements. Recently costs of some tablets have come down, making the scheme more viable for parents. In addition the number of options available allows parents to make their own choice, avoiding vendor lock-in.

The evolution of the internet and Web 2.0 means that the main learning benefits can be achieved regardless of the device selected. It has been necessary to upgrade the school's network to cope with the increased Wi-Fi demands, and to implement a filtered 'open' Wi-Fi system for the BYOD devices. The 'open' Wi-Fi domain is segregated from the main school network and access to the internet without logging in was considered essential to minimise the time wasted in lessons with connectivity issues. Sandringham is the first school in Hertfordshire to work with Herts for Learning/ Hertfordshire Internet and Connectivity Service (HICS) to upgrade their internet connection from 100mb to 200mb. The school found that with around 2,500 devices on the network in the school day, the bottleneck was access to the external internet. The upgrade performed in December 2015 has removed this as a bottleneck for now, but the school continues to monitor utilisation.

### Supporting pupils and parents with access to the devices

A survey in January 2014 showed that 45% of Sandringham students already owned a device that would be suitable for the BYOD scheme. This confirmed a significant proportion of pupils already had their own technology and made the scheme easier to implement.

The school has ensured that the BYOD scheme is equitable so that no student is disadvantaged in any way. Parents were given the option of signing up to a school lease/purchase scheme. This included a device, case and insurance, with ownership being transferred to the parent/student following a period of monthly payments (12, 24 or 36 months). The school asked for a small financial contribution in order for parents and students to be stakeholders in the programme as research from other schools suggested that fewer devices were lost or damaged when some contribution was made. However, no student was excluded from the programme based on

ability to pay. Pupil premium students, as well as other pupils whose parents could not afford a device, were supplied with a tablet on loan.

The school is unlikely to offer the lease scheme next year as most parents sourced their own device in the last round of equipping students. However there will continue to be support for pupil premium and other students who require financial help. Teachers still have the option of borrowing the school set of 32 iPads if they had a specific iOS-only app that was essential to that lesson.

## Tablet safety and security

There were some concerns from parents about the BYOD scheme, particularly around the risk of theft, loss and damage. To keep parents and carers involved in the process the school has created a blog, hosted information evenings and shared information on safety, insurance etc. Parents' working group meetings were also held at regular intervals during the planning and trial stages, with presentations made available to all parents through the blog.

Throughout the information sharing process parents were advised to have insurance/accidental damage cover for the device, which may already be covered their home contents policy. For parents buying the devices themselves, a range of insurance and accidental damage policy options had been suggested. The school also recommend pupils to have a sturdy case to transport their device to school.

The school advises pupils to not advertise their device unnecessarily and to keep it in their bag on the way to and from school. Pupils are also encouraged to security mark their device (e.g. with a UV pen) and register the serial number on Immobilise, a national property registering website. This would help the police to return it to them if it is lost or stolen- something which has not yet happened in the school. By enabling features on their device to track the location, (e.g. Find my iPhone), the whereabouts of the device and lock/erase can be established if necessary.

For eSafety reasons all students are required to use the school filtered internet (3G/4G must be switched off during normal school times). Access to social networking is blocked for all but sixth-form. All pupils have signed an Acceptable Use Policy, which sets out the eLearning rules and responsibilities; this agreement was discussed and finalised during the parent working group meetings.

## Training for staff and students

Staff at Sandringham School have received training on Blended Learning, with plenty of 'drip feeding' ideas into teaching and learning briefings, the school blog and INSET sessions. The two-day staff conference this year is on this theme with a keynote speech from Mark Anderson, award winning education technology expert. The school has published an eBook on Amazon and iTunes for staff that outlines strategies and selected apps and tools for use in Blended Learning teaching, demonstrating existing staff expertise on the topic (see info box for link).

Although students didn't need training on basic device usage, they did require training on learning applications and systems such as Google Drive. Sandringham developed a six lesson induction programme at the start of year 7 and students from each year group who act as 'Digital Leaders' are crucial in supporting staff and other students in lessons. The Digital Leaders have written their own student app (led by Computer Science GCSE students) that integrates timetable, notices, access to school social media and extra-curricular events. They have also recorded training videos and act as support for both the teacher and learner in lessons.

## How the devices are used in lessons

The school is keen to stress that running the BYOD scheme does not mean it is doing away with writing, reading and textbooks; instead the devices are used as a resource to complement existing learning materials and pedagogy under teacher discretion.

Students are given unlimited cloud storage space on

Google Drive, making storage on the device itself is less of an issue. The school also tries to utilise free apps and services as far as possible, with reference to paid apps as suggestions only, rather than essential. The school provides access for students and families to Microsoft Office 365 that can be downloaded for use on up to five devices at home and Google Apps for Education that provides email, Google Docs storage accessible from any device and a platform for collaboration. The school also provides various commercial online learning tools such as SAM Learning, Kerboodle and Encyclopaedia Britannica and a portal that provides access to the best online learning tools and remote access to school systems. Pupils have access to loan facilities for eBooks for both fiction and non-fiction/textbook titles. A portal called Show My Homework lists homework tasks and due dates for each child based on an online calendar.

In addition to Google apps pupils can access a wide range of online tools and apps to support their learning, for example: Mindmapping with apps such as Popplet (iOS), filming and reviewing dance and drama performances using the device camera, interactive learning with Thinglink (web based), scanning teacher-created QR codes to access learning resources, revising with Study Blue (web based), classroom response activities using Socrative (iOS/Android or web based), accessing eBooks from Browns Books for Students and creating learning walls using Padlet (web based). If certain subjects require pupils to download apps specific to their subject teachers will ask pupils to download these and also notify parents via Show My Homework.

So far usage in lessons has been diverse. Pupils can use their devices as a video camera in media and IT, research for science practicals, a musical instrument, a paintbox in art, reviewing performances in dance and P.E, an atlas and encyclopaedia in geography and history. Sixth formers have particularly benefitted from the ability to research online and write essays on their own laptops.

## Impact

The school hopes that the BYOD scheme will improve student engagement (particularly for SEN students who may struggle with traditional media), independent learning and collaboration. Since implementing the scheme there have been increased opportunities for personalisation of learning and pupils have been leading their own learning with greater opportunities for lesson flipping. Through using their devices in lessons pupils have been able to develop their research skills and extend their learning beyond the confines of the classroom and the school day. In a recent survey pupils stated that the best aspects of the BYOD scheme were that they could use their devices for internet research, including at any time they were stuck with something, learn independently and that lessons became more fun and interactive.

The BYOD scheme provides opportunities for the school to have more access to digital learning media without having to build more ICT suites. With every pupil having a personal device, the need for photocopying, printing and planners will reduce.

Clearly it will be essential to measure the impact of the BYOD scheme. Sandringham is a Leading Edge school, part of a network of schools committed to innovation and sharing good practice. Through this the school has obtained a bursary to run an action research project to assess the impact and effectiveness of this scheme. This case study will be updated as this project progresses.

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Related documents and links	<a href="http://www.mysandstorm.org/category/21st-century-learning/information-for-parents/">http://www.mysandstorm.org/category/21st-century-learning/information-for-parents/</a> <a href="https://itunes.apple.com/gb/book/blended-learning-toolbox/id1033030097?mt=13">https://itunes.apple.com/gb/book/blended-learning-toolbox/id1033030097?mt=13</a>

If you have an aspect of interesting practice that could be shared or are interested in finding out more about a case study please get in touch by emailing [exchangingexcellence@hertsforlearning.co.uk](mailto:exchangingexcellence@hertsforlearning.co.uk)

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