

## Western and Northern Europe

### Case Study 1: Fulbridge Academy (3-11), Peterborough, UK

#### Success factors

- Strong and focused leadership from school management and governing body
- Teaching and learning is first priority. Good teachers with innovative thematic pedagogy applied throughout
- Dedicated technology coordinator and network manager
- Sound infrastructure with robust Wi-Fi across the school
- Clear rationale for the use and distribution of technology resources
- Planning for how to improve learning through new digital tools and technology
- Technology embedded in teaching and learning
- Students encouraged to “play” with a new device or app before using the tools for learning
- The school recognises and value of the student’s culture of learning through video. Use of YouTube for learning is encouraged and guidance and training is given.
- Teachers are all given a device and time to familiarise with the technology
- Teachers learn to use technology together. Peer support helps solve problems and share learning resources and methodologies
- Teachers use technology for collaboration and for management and administration
- Principal understand the relevance and need for technology
- Creativity encouraged and authentic learning is key

#### About the school

This schools serves a culturally diverse and economically challenged community and has 800 students. 81% of students have English as a second language with 30% of the total students having poor or no English language skills. Currently the school has 120 staff with an average student-teacher ratio of 1-15 but this is constantly under review due to funding. The school aims to develop the creative, social, emotional and academic potential of all students and *“encourages exploration and creativity through an inspiring, broad and balanced, engaging curriculum where learning is at the heart”*.

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#### School achievement

The school consistently overcomes many challenges to deliver outstanding results in a region with social and economic challenges, a broad multi-ethnic mix, and a majority of students having English as a second language. The school has been rated outstanding by the UK schools’ inspection system,

Ofsted, and it is consistently rated very highly in national and regional assessments. It is noted for its development of student creativity. The school is characterised by strong and passionate leaders, good teachers and innovative approaches to teaching and learning. The school takes a thematic approach to learning consistently applied across all school years and forming a major part of the learning activities in each semester.

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In national league tables, the school is ranked 29<sup>th</sup> in the country for the age range, and 1<sup>st</sup> in the city and within a 75-mile radius. It ranks 3<sup>rd</sup> nationally in the Ofsted rankings when compared with schools with a similar percentage of disadvantaged pupils in the cohort. The principal believes the top success factors this achievement are leadership, teachers and creative pedagogies.

#### Use of Digital Technologies

Technology is seamless and well-managed throughout the school, underpinning activities in most classrooms. According to the principal, the school's success is due to leadership, curriculum and teachers, and the creative use of technology embedded in the teaching process. While rating leadership, teaching and curriculum top at 9/10 or 10/10 for priority and impact, he rated the impact and the necessity of technology as a key underpinning enabler close behind at 7/10. ICT is used in multiple modes in all classrooms with software and content tools supporting teaching and learning, project assignments with the standard productivity software tools and interactive display learning activities taking place. In the IT lab, year 5 students were learning to program Scratch using a mix of desktop devices, 2-in-1 devices and tablets supporting early computer science and IT skills development.

The head of technology has built relationships with IT companies and individuals within each company creating an effective partnership with them to get best results.

One of the most important factors in the school ICT system is the network design and support. When the current head of technology took his position as network and technology manager, his priority was to plan for adequate and well supported Internet bandwidth, Wi-Fi LAN capacity, and robust Wi-Fi routers. With support from a dedicated network manager this allows the teachers to depend on the technology and support in every classroom every day.

#### Technology infrastructure and devices

A Cisco Meraki Wi-Fi solution has been implemented throughout with commercial grade routers providing the capacity for all devices to be used simultaneously. The student device ratio is between 5:1 and 10:1 which the head of technology believes is a good ratio for a primary school with today's level of ICT usage.

The school operates a mixed device and operating system environment. Windows 2-in-1 devices are used widely throughout the classrooms with the IT suits for computer science and supporting other project-based learning. Tablets are widely used in all classrooms supporting the learning and teaching activities. These are a mix of iPad and Apple devices. Each teacher has a PC assigned to them. The school made a significant iPad investment about 7 years ago but is now moving to more

flexible Windows devices and considering Chromebook evaluation. The IT manager is very happy to operate a mixed-technology environment. The move of the majority of activities to Cloud services, the improved simplicity of the devices and levels of computer literacy of the students and the desire to expose students to different computing environments supports this. A more mixed environment also provides the school with greater flexibility in planning and procurement decisions. Interactive flat panels are installed in every classroom and are used for a wide range of activities, including student-led group activities.

All the devices used are currently provided and managed by the school. Equality of access is important in an economically deprived area though the evaluation of some BYOD models is planned.

#### Digital pedagogy

Technology is seen as a supporting toolset for the learning and teaching processes and is used when considered appropriate. The school values communication and collaboration so basic 1-to-1 computing usage models have been dismissed in future planning. It was widely recognized by students and teachers that students tend not to collaborate with a 1-to-1 model. The school is aiming for around 10 devices per classroom. Smartphones have been successfully trialled and there is a vision to make more use of them, but the school is first investigating a way to collect students' work undertaken on these devices.

The head of technology attributed his success in digitising the schools to surrounding himself with experts and building the relationships with supporting service companies needed to help make decisions: *"You need to understand what you need to know and what you need to actually do and where you should bring trustworthy expertise in."* He also said that, *"the network manager needs to understand learners and what can go wrong and you need to have it "bomb proof", but when it fails, you need know who to go to and how to get it fixed."*

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#### Teacher confidence and use of technology

Every teacher comes to the school knowing they must be confident in using ICT. Teachers are encouraged to use YouTube to learn how to use new technology. Every teacher is unable to get through the day without the day without using IT in a number of different ways for instructing, planning, group activities and any other usage modes. It is used for registrations, data management and administration. Teacher collaboration is encouraged in real time using Google sheets: the school improvement plan was developed collaboratively on Google sheets in just 45 minutes through staff meetings. Teachers also share resources with students in class account on Google.

#### Teacher Professional Development

This school is at a mature level in the use of technology with at least 15-years of experience. Self-learning and peer support helps the staff stay current with new approaches and technologies, to the point that it has become a seamless part of their daily routine. Peer support helps solve problems and staff share learning resources and methodologies. While a well-planned TPD initiative is generally recommended for less mature schools, this school used a much more organic and internally supported approach building on existing experience.

## Technology use across the curriculum

Students' confidence in knowing how to use any device is encouraged. The school divides the use of technology into three areas: computing, digital literacy and multimedia, or maker, work (learning) and social.

<b>Computing (<i>Maker</i>)</b>	<b>Digital literacy (<i>work</i>)</b>	<b>Multimedia (<i>social</i>)</b>
Use themselves – physical instructions YK-6	Word and PPT Y1-2	
Alex, Scratch, Lightbox, Daisy, Bbots Y1-2		iMovie, Garage Band, StoryMaker 3, YouTube
Scratch and hour of code Y3-4		
Hour of code and coding Y5-6	Google sites Y5-6	

The overall approach is to emotionally challenge students to help them to connect with learning to make it authentic. An example given was that the destructive force of the Hiroshima bomb cannot be properly understood except through video. In fact, they find that students prefer to use YouTube so students are taught how to make best use of it.

The school makes use of a lot of Apps and teachers work together within their teams to share expertise. Technology is perceived as helping to overcome barriers to learning such as reducing need for excessive trial and error. The first lesson with any new technology or App is for students to play with it first and learning to type is included in curriculum. E-safety is taken seriously and is essential in all teaching of ICT. Every year group has a Facebook page to show off their current learning. However, Edmodo is being considered as a social media tool and Skype classroom being considered. Google classroom is used across the school. End of year reports have been sent by email for the first time this year as a trial