is being used much more frequently. As a result of this, schools will need to provide less ICT induction. Students will be able straight away to concentrate on their subjects not the technology. This is likely to be helped by a new lower secondary curriculum which includes more emphasis on ICT.

Juho Airola believes that, "schools are currently waiting for school books 3.0". Students at upper secondary level traditionally buy their own books and, whilst eBooks are getting better, they are not yet good enough to take over from paper. Even without BYOD, he predicts a move away from textbooks as, "it will be best for students to develop their own [personalised collections of relevant learning resources] rather than using books that are used briefly and then thrown away. This is something which BYOD will support and the resources could be available and of on-going use beyond school".

9.4. Engaged and informed school leaders drive transformation in Ireland

This case study considers the example of an engaged, informed and innovative school principal in Ireland leading implementation of BYOD in his school.

🏠	Secondary, upper secondary	🌐	Semi-urban
🏠	iPads	🔍	Mixed catchment

Background, context and drivers

There is no national BYOD policy in Ireland, although the Department of Education and Skills (DES) is due to release a new Digital Strategy for Schools in 2015 which will make reference to BYOD. The general approach in Ireland is for the government to provide support and *advice* to schools in the area of ICT integration, which includes strategies such as BYOD. Ultimately the decision making takes place at school level. This support and advice for schools is mainly provided through the *PDST Technology in Education* support service which is funded by the Department of Education and Skills.

Confey Community College is a state school for 750 students aged 12-18 about 20km from Dublin in Leixlip, an attractive and fairly prosperous semi-urban village which is also the location for a very large Intel manufacturing facility. Of the socially mixed annual intake of students, typically a small percentage are from disadvantaged families.

The main driver for BYOD in Ireland is probably the limited funding at school level to purchase technology. It may be the only way some schools can implement a 1:1 policy or integrate ICT. Also, students' devices are generally more up to date than those provided by schools.

The mobile devices

In 2012, the school's local Education and Training Board (ETB) provided funding for iPads and training for teachers and BYOD started in the 2012/13 academic year.

The school specified devices have to be iPad 2 or above with a camera but no 3G. iPads were chosen mainly because of the large number of apps and eBooks available for them at the time the BYOD initiative was being planned. A tablet with a keyboard was considered but rejected as it was €100 more expensive. The school also decided to rule out "pure BYOD" involving students bringing any device they owned. This was perceived as being potentially problematic. The Principal wanted teachers to be familiar with and be able to use all the devices students would be using in class and this is easier to achieve if they are all using the same device.

Funding arrangements

Parents are asked to buy iPads for first year students starting at Confey along with a selection of eBooks instead of textbooks. Parents have found this acceptable as Irish parents are already expected to buy textbooks for their children and because many were concerned about the weight of the school bags their children were

carrying. The transition year from primary to secondary is probably also a time when parents are most receptive to making this sort of investment as their child moves into a new environment.

Participation in BYOD

Initially all new intake students were expected to arrive with their iPad. The scheme was then extended to Year 2 and is now being rolled out to Year 3 students. The decision to start with younger children was taken as it was seen as easier to introduce the change for students not yet involved in high stakes exams. In total, around 280 students are involved in BYOD and using their devices in all curriculum subjects. About 50 teachers qualified under the ETB tablets for teachers scheme. All these teachers teach first and second year students.

Advice, training and incentives for staff

A few years ago the Principal, Mike O'Byrne, was seconded to the national support service now called PDST Technology in Education. This led to him having a broader perspective than a single school, being well informed regarding good practice and knowing where to go for advice.

Following participation in the ETB tablets for teachers scheme, teachers took the iPads home over the summer break. This provided an opportunity to familiarise themselves with the technology prior to implementation of BYOD at the beginning of the next academic year.

Teachers were given five hours of training led by a commercial service provider at the start of the first school year with teachers working in groups using apps. In the second year a three-hour training session was added with teachers sharing information and experiences regarding the apps they had been using with their students.

Technical support

Administrative and logistical issues informed the choice of iPads as the device parents would be asked to provide for their children. In 2012 there were only one or two companies in Ireland providing managed services with support for tablet devices and these services were offered for iPads only. The school selected a company called Wriggle to provide their support service. The Principal says he would not have considered a BYOD roll out without the backup and support of a managed service provider.

Benefits

Using their own tablets in schools helps to address the disconnect between how children use technology inside and outside of school. The school see BYOD and use of technology as key to modernising education.

In school teachers no longer have to plan to go to a special computer room to use ICT. The Principal has also noted a marked advance in the teachers' confidence when using the devices.

The school building is 26 years old and there are limits to what can be done in terms of reorganising learning spaces but, with 1:1 devices and BYOD, it is possible to support new forms of collaboration and group working.

Camera equipped devices, apps and the internet provide students with new ways of being creative and communicating. Teachers have noticed: improved student digital literacy; more student collaboration; better research with students gaining experience in looking for content; and improvements in how students organise and present their work. Students with special needs also now have alternatives in terms of how they present their work, e.g. using the camera and videos.

The extent to which the combination of the tablets and the use of _Edmodo_ has extended the classroom environment, in terms of the improved communication and collaboration between students and classes inside and outside the school, has exceeded the Principal's expectations.

Currently 2nd year students are already helping 1st year students and teachers expect peer to peer support to continue and expand as BYOD is rolled out across the whole school.

BYOD has opened up an active dialogue in school and with parents on the issue of use and misuse of ICT and the internet. Previously this was not really on the agenda but now, as students bring their own personal devices into school, "the ethics of online life" is much more of a hot topic.

Challenges

During the first year using the iPads it became clear that the Wi-Fi network was not adequate. Action was necessary and so three potential supplier companies were asked to carry out a site survey and a Wi-Fi specification was drawn up in line with school broadband recommendations provided by PDST Technology in Education. Following this, wireless access points were installed in each classroom, leading to a greatly improved service.

Teachers were initially very concerned that students might misuse iPad cameras, e.g. by uploading photos of the teachers to the internet. Possible sanctions for use against individual students were discussed in advance. However, this problem has not occurred. There was a problem of some students texting in class using iMessage which was solved by the school finding a way to block iMessage use.

Lessons learned

When starting the BYOD initiative, the schools decided to use eBooks from traditional publishers rather than insisting that teachers created their own content. This was in order not to alienate the teachers who were more comfortable with a textbook based teaching approach. However, in retrospect the Principal thinks it might have been good to have required teachers to create their own resources in the first year of the BYOD roll out rather than relying only on eBooks from publishers. Currently, the intention is to have many more teachers and students creating their own learning resources and to focus more on setting up online communities.

Schools should provide more training for staff during first year and generally invest more heavily in training so that teachers have more idea of what they can do with the iPad.

Monitoring and evaluation

The school carried out surveys of staff, students and parents in the first year. In the second year all staff were surveyed and a spot survey of parents was carried out. A major survey is planned for next year, the results of which will inform planning before extending the iPad scheme to the senior years.

National level advice

As mentioned above, the PDST Technology in Education support service have produced advice for schools concerning BYOD.

The first key message in this advice is that when considering introducing student devices such as tablets, "schools should first consider the school learning priorities and outcomes rather than focus on the technologies involved.

- As part of the school self-evaluation process, schools need to identify overall school learning priorities and outcomes.

- The school e-learning plan should form an integral part of wider school planning to achieve these outcomes.

- Schools should consider how introducing student devices as part of a BYOD approach could support achieving these learning priorities and outcomes."

PDST Technology in Education's key tips for success are summarised as:

- Planning, consultation and communication with stakeholders is critical.

- Form a small team to coordinate the initiative, include key stakeholders.

- Expect issues to arise, try and see these as learning opportunities for process improvement.

- Start small, possibly with two teachers working together, review before taking next steps.

- Seek advice from other schools and teachers.

A principal's advice to other schools

Principal Mike O'Byrne's three key messages are:
- "Don't put devices into classrooms until you have reliable Wi-Fi".
- "Don't think that there has to be constant use of the devices; there must be times when they are put away".
- "Don't rely exclusively on eBooks from publishers. Teachers should start developing their own content for BYOD devices as early as possible".

He also believes it was a good thing to start BYOD with all students in the transition year rather than by starting with a small pilot group.