What Can We Learn from the International Digital Educational Revolution?

The use of ICT has been embedded into all six key skills for Junior Cycle: Managing Myself, Staying Well, Communicating, Being Creative, Working with Others, and Managing Information and Thinking. In May 2022 the Minister for Education announced the publication of the Digital Strategy for Schools to 2027. It was developed after consultation with many stakeholders, including children at primary school, students at post-primary, their parents or guardians, teachers, and school leaders. This article looks at the digital infrastructure needed to realise the full potential of the strategy.

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Introduction

The Digital Strategy is ambitious and provides a comprehensive roadmap which endeavours to ensure that our school system is preparing our school communities for the modern world. The strategy has been created around three pillars:

Pillar 1: Supporting the embedding of digital technologies in teaching, learning, and assessment.

Pillar 2: Digital Technology Infrastructure.

Pillar 3: Looking to the future: policy, research, and digital leadership.

It is clear from the consultation with teachers that the majority, at both primary and post-primary level, engage with the digital supports and resources available to them. These include the Junior Cycle for Teachers (JCT), Professional Development Service for Teachers (PDST), Education Support Centres Ireland (ESCI), Webwise, and Scoilnet. The Digital Strategy recognises that effective planning of digital learning is essential to ensure that schools can successfully embed the use of digital technologies across the curriculum.

The reports on the consultation that informed the Digital Strategy are available to download from the Department of Education website. The reports on the findings from the questionnaires for post-primary students and teachers are worth reading, as it is clear that the voices of stakeholders mattered (Department of Education, 2022a, 2022b, 2022c). When asked if there was any particular area or subject that a new Digital Strategy for Schools should include, most students had no opinion or didn't know, but some responded thoughtfully.

Students asked that the strategy include coding, fast broadband, access to devices, and online safety. The data collected from teachers echoed these answers. When teachers were asked about barriers or obstacles, they reported insufficient broadband, a lack of resources for both mainstream and special educational needs (SEN), a lack of time, access to devices, and GDPR concerns.

Another question asked students if they or their fellow students have been involved in the development of any policies on the use of digital technologies in their school. Of 138 respondents, 28% answered yes. This number will grow as we look forward to seeing the Education (Student and Parent Charter) Bill being passed in the Dáil. The school digital policy is an important document, and it is very positive to see that the student voice has been consulted in its development.

Digital devices

There have been many studies on the student experience and engagement during the pandemic (Mac Domhnaill et al., 2021). These experiences have certainly informed the consultation. When asked about the digital infrastructure that is most important to enable the use of digital technologies in teaching and learning and assessment, teachers ranked a device for teachers as the most important, and devices for learners in second position.

Since Covid-19 we have seen a welcome increase in grant funding for digital technology infrastructure to both primary and post-primary schools. This funding is a foundation step to covering the visible and invisible cost of such an ambitious strategy. As part of the consultation, students were asked if they have access to a digital device to use in school during class when needed: 121 (85.8%) said yes, and 20 (14.2%) said no. Students reported using a mix of devices (laptops, tablets, and smartphones), but there is inequity in the classroom: only 72 students (52.9%) said that the device they were using to carry out necessary classwork was provided by school, while 64 (47.1%) said they provided it themselves.

“52.9% [of students] said that the device they were using to carry out necessary classwork was provided by school, while 47.1% said they provided it themselves.

Over the last decade we have seen an increasing number of schools operating primarily on the use of devices, usually tablets, as the primary learning resource in classrooms. In Ireland this expectation currently depends on the policy of each school (Marcus-Quinn et al., 2019). Some schools provide staff with a complimentary device as part of a contract with an external technology provider. But the provision of devices to all teachers in Ireland is certainly not mandated by the Department of Education; it depends on the internal policy of any given school.

For many students, ‘bring your own device’ (BYOD) is still a reality, and the range of devices being used varies hugely. Schools have little control over what social media, for example, is accessed during the school day. It is much

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harder to implement a clear digital policy in this scenario (Garba et al., 2015; Dunne et al., 2020; Feerick et al., 2022). The situation also forces some families to buy their 12-year-olds a smartphone despite evidence that children under 13 can be negatively impacted by a smartphone (Dempsey et al., 2020).

Many teachers are also still using personal devices such as phones, laptops, visualisers, and Wi-Fi speakers, although this is gradually being phased out due to recent GDPR legislation (Marcus-Quinn and Hourigan, 2021; Murphy et al., 2021).

According to the latest available figures in the October Returns for 2019/2020 (returned via the Post-Primary Online Database P-POD), the number of registered post-primary students in Ireland is 371,450. This figure will likely be much higher for the current academic year, given the high number of Ukrainian students that Ireland has welcomed. If every student were to be provided with a device by the Department, it would require a much larger budget than is currently provided. But in the interests of equal access to technology, this level of support is what is required.

It is worth looking at international best practice, such as Estonia's highly regarded Tiger Leap Foundation or the later Digital Educational Revolution in Australia, and learning from their experiences. In 1997 Estonia set out to provide all schools with computers and internet as part of a broader strategy to build an information society (Aru-Chabilan, 2020; Põldoja, 2020). In 2008, the Australian federal government initiated a national policy to provide all secondary students and teachers with new and upgraded information and communication technologies. This initiative, which ran from 2009 to 2014, was to ensure that students and teachers had the same access to the digital technologies necessary to support learning, and to prepare students for full participation in future society.

Some aspects of both the Estonian and Australian programmes worked extremely well, and some were less successful (Niederhauser et al., 2018; Velmet, 2020). There are published case studies based on empirical evidence that we should be considering for the next stages of our own Digital Strategy.

Conclusion

This new Digital Strategy is our best roadmap to date for building digital skills and competencies. Devices are an attractive option for many schools, because having a tablet or laptop can negate problems that can, and do, arise with smartphones. More funding for appropriate devices for both teachers and students at post-primary level is critical if equity of the digital experience is to be achieved.

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