Ireland

Country Report on ICT in Education

Available on http://www.eun.org

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1. THE EDUCATION CONTEXT

1.1 Key educational challenges and priorities

The use of digital technology to support teaching, learning and assessment has become a key priority in our country. To this end, the Digital Strategy for Schools 2015- 2020 has been implemented nationally. Key objectives as set out in this policy document refer to the use of ICT in classrooms to ensure that our school going population are skilled in this area and so can avail of future opportunities in a workforce that is ever increasing in relation to its digital proficiency. More immediately, ICT is being used in a variety of ways in schools to aid students to deepen their learning meaningfully, utilising ICT to support the learning process and create digital content to showcase this learning. At present we are about to engage in a national roll out of a newly formed 'Digital Learning Framework for Schools' which recognises the work that schools are doing in this regard and aims to provide a reference guide, supporting schools with their in future growth in the area of digital technology.

At present, there is also a keen focus on literacy and numeracy in our country resulting from our national performance in recent PISA assessments. Resulting from this focus a strategy was devised and implemented- 'Literacy and Numeracy for Learning and Life- The National Strategy to Improve Literacy and Numeracy among Children and Young People 2011 -2020' which places national priority in these two key areas. Of note in this strategy is the inclusion of Digital Literacy as an area requiring attention. To this end, schools nationwide are now engaged in activities to embed digital technologies more meaningfully in the classroom to enhance teaching, learning and assessment. Teachers are also upskilling themselves in this area through regular CPD to aid in this task.

1.2. Education Reforms

No new educational reform was introduced in the last 2 years.

2. DIGITAL EDUCATION POLICY

2.1. National/ regional digital education policies

As noted above, the most recent educational policy initiative in this area that has been implemented is the Digital Strategy for Schools which was introduced in

2015 and runs until 2020. This policy document commits to integrating ICT more deeply into the education system. The Strategy maps out how this commitment can be realised and the ways in which ICT can be used by schools to broaden and enhance teaching, learning, and assessment practices. At its core it promotes a constructivist pedagogical orientation underpinning the embedding of ICT in schools nationwide. Importantly, this strategy was also supported with annual grant money (a flat rate per school, supplemented with a per-pupil financial amount) over the course of its 5 year span being provided to schools each year so that they could invest in ICT resources. Link to documentation

At present, Ireland is currently involved in rolling out a new national digital initiative- 'The Digital Learning Framework'. This policy document aligns itself with another key existing policy document- 'Looking at our Schools 2016- A Quality Framework for Schools' and so can be easily integrated into current practice in schools. The aim of this framework is to provide schools with a guide pertaining to their use of ICT in their school and how they can progress in this regard using materials that have been carefully devised and will be published. Training in relation to the use of these materials will also be provided by supporting governmental bodies, such as the Professional Development Service for teachers (PDST).

2.2. Responsibilities

Policy in the area of digital education in schools is the remit of the ICT Policy Unit of the Department of Education and Skills. Further information is available here This includes links to those entities to whom responsibility for specifics such as professional development for teachers has been devolved. In the area of initial teacher training, responsibility for carrying out policy resides with the individual colleges of education, under the guidance of the Teaching Council of Ireland.

2.3. Specific digital education initiatives

Area	Short description (objective, timeframe, target audience, key actors, number of schools, teachers involved, level of implementation (national, regional local)
Student identity management and School management systems	• *A growing number of schools are adopting digital school management systems as a means of collecting, storing and analysing student data. The Aladdin software system (https://www.aladdin.ie/ and VSware appears to be the primary tool used in this regard presently.* • *Nationally, when teachers are engaged in writing academic reports for the children in their class they utilise a common report template devised by a governmental body, the National Council for Curriculum and Assessment (NCCA). This template once completed can be stored by individual teachers, and/or uploaded to a common server or data management system used by the school, such as that noted above. In this way there is easier access to digital student information for educational services, in keeping with ethical guidelines.*
New learning spaces	• *As a result of the recent ICT initiatives noted above being introduced, pupils' engagement with ICT in the classroom has also increased, and will continue to do so with the roll out of future policy documents. As collaborative learning is a central feature of such initiatives increased levels of group work is taking place which often leads teachers to reorganise their learning space to promote greater communication amongst pupils working with digital technologies, particularly in cases where the pupils may be sharing devices.* • *The emergence of Makerspaces is also evident within the Irish context. A cascade approach can be seen in evidence here whereby teachers engage in Makerspace activities at organised events, such as national conferences, and then bring this experience back to their classrooms.* • *Innovative national initiatives, such as the Fís Film Project, (http://www.fisfilmproject.ie/) challenge traditional ways of learning in the classroom and promote a more flexible*

	learning environment in terms of classroom layout when using digital technologies to create short films/animations. Here, pupils are developing their ICT skills while also deepening their curricular learning. When engaged in the filmmaking process various locations in/around/ outside of the school can be used and thus become, in effect, the childrens' immediate learning environment.
Game based education	• *Many of the teaching materials currently being used in schools in Ireland are accompanied by game based resources which aim to consolidate learning for the pupils in an engaging and fun manner. Generally, the publisher of the teaching materials will require a current booklist by the teacher to allow them to gain access to these free digital resources.*
Implementation of computing, coding, computational thinking initiatives	• *Computer Science will be introduced as a Leaving Certificate subject (post-primary level – 12 – 18 yo) in the school year 2018 to be examined for the first time in 2020.* • *The Maths curriculum at primary level (age 5 – 12 yo) is currently being revised by the National Council for Curriculum and Assessment, with a key change being to focus on computational thinking, and this may include coding.* • *Computational Thinking has become a key focus in Irish education of late. In responding to this educational trend, the primary national support service for teachers, the PDST, devised a summer course based on this topic which was extremely popular with teachers in July and August 2017. This course developed teachers' sense of what computational thinking essentially comprises of, as well as how to introduce this concept into the classroom. It also explored the link between computational thinking and coding and provided course participants with ample opportunities to engage with online and offline coding resources which they could then in turn use with their own classes.* • *Scratch is also a very popular national coding initiative and is run by the Lifelong Kindergarten group at the MIT Media Lab. Link here: https://scratch.mit.edu . It is a programming language and an online community where children can program and share*

	interactive media such as stories, games, and animation with people from all over the world. As children create with Scratch, they learn to think creatively, work collaboratively, and reason systematically
Self- or peer assessment tools/frameworks for teachers and students digital competence including certification	• *The newly devised and recently published national policy document, 'The Digital Learning Framework for Schools', will essentially embody a self-assessment tool for teachers which they can use to evaluate how effectively they are embedding ICT into their practice and it will also contain statements of 'Effective' and 'Highly Effective' practice in areas, or 'standards' as they are referred to in the framework, which will allow teachers to see how they might improve on their current practice when embedding digital technologies to support teaching, learning and assessment in their own context. This resource will also support schools and school leaders in the embedding of ICT into teaching learning and assessment at a whole school level. This resource can be found here*
Tests (ICT or non ICT based) for teachers and students to test their digital competence	• *In recognition of pupils' increasing levels of digital proficiency, and in line with the strong focus placed on digital literacy in our national literacy and numeracy strategy, traditional paper-based standardised assessments are now being moved online and it is hoped that students will be able to complete their assessments using this platform, if they wish, in the near future. The Educational Research Centre (ERC) have been working on piloting these assessments. Currently the post-primary tests are available, with the primary tests having just undergone a piloting period. Link to these tests here*

2.4. Digital education priorities

Area	High priority	Medium priority	Low priority	Reference to policy action measure (if any)
A: Digital Competence Development	*X*			*All such actions can be found here. and here.*
Developing measures to support digital competence of **future teachers**	*X*			
Developing measures to support digital competence of **in service teachers**		*X*		
Developing measures to boost youth **employability and entrepreneurship**		*X*		
ICT for **accessibility** and **inclusion**: early school leavers, migrants, special educational needs etc.	*X*			
B: Curricula and Assessment	*X*			
Developing **digital competence/media literacy** of students	*X*			
Developing computer/programming skills/**computational thinking skills**	*X*			
Developing **key competences** [1]	*X*			
Developing **21st century skills** (critical thinking, problem solving, communication, collaboration, creativity and innovation)	*X*			
Assessing with ICT/ICT based exams	*X*			
C: System-wide innovation	*X*			
Developing measures to support **school leaders** in the integration of ICT	*X*			
Piloting and validating innovative uses of ICT	*X*			

[1] See EC Key competences for lifelong learning: digital competence, math science technology, communication in mother tongue, communication in foreign languages, learning to learn, social and civic competences, sense of initiative and entrepreneurship, cultural awareness and expression. http://europa.eu/legislation_summaries/education_training_youth/lifelong_learning/c11090_en.htm

Mainstreaming ICT in schools	X			
Monitor and research digital learning in schools	X			
Learning analytics (using digital technologies and data to support learning)	X			
D: Mobile Devices	X			
Use of tablets	X			
Use of mobile phones		X		
Bring Your Own Device		X		
Cloud computing/services	X			
E: Use of digital learning resources	X			
Developing educational content repositories/metadata	X			
Supporting the development of open educational content and resources	X			
Supporting the development of educational content/resources provided by publishers	X			
Promoting teachers' use, creation and sharing of educational resources	X			
F: Learning environments				
Developing/adapting flexible learning spaces	X			
Linking formal, non-formal and informal learning using ICT	X			
Providing equitable access to ICT (infrastructure, devices and content)	X			
Providing a safe learning environment to students and teachers	X			

3. INTEGRATION OF DIGITAL TECHNOLOGIES IN THE CURRICULUM

3.1. Digital technology based assessment

As noted above, there is a current more towards online standardised assessments in our country. Although the traditional paper-based tests are still in operation, it is hoped that more and more schools will move to the online versions over time.

Many teachers in our country also employ the use of digital portfolios when engaged in assessing pupils. Here the use of specific programs, such as here, or

simply using folders set up in an online drive can prove extremely effective when collecting multimedia content. This diversity of digital material can give a clearer picture relating to a pupil's progression than perhaps paper-based assessment portfolios can allow.

Importantly, in our state exams at post-primary level pupils can engage in project based learning using ICT in some subjects, a central component of which may be the creation of a digital project which is subsequently submitted for assessment.

3.2. School improvement with ICT

In terms of school self-evaluation, there exists a formal process which schools currently undergo in this regard as directed by the Department of Education, as previously mentioned in this document. Each year schools throughout the country may highlight an area they wish to focus on and improve, compiling a school improvement plan to document the journey they expect to take to achieve this aim. ICT can often constitute this focus. The school revisit their plan at various points throughout the year to assess their progress. Inspectors from the Department of Education may also view these plans if visiting with a school to see what areas they have prioritised and how the school aims to achieve improvements.

A school may also monitor their improvement with regards embedding digital technologies by utilising the Digital Learning Planning Guidelines devised by the technology in Education team, as well as its other accompanying resources. This provides resources for schools to plot their current position in terms of their use of digital technologies to support teaching, learning and assessment and can then identify achievable targets as outlined on the roadmap to enhance their current practice in this regard. This leads to the construction of a Digital Learning Plan which can be reviewed and updated regularly, aiding schools to monitor their own progress. Further information can be found at: http://www.pdsttechnologyineducation.ie/en/Planning/

3.3. The curriculum framework

Centralised Curriculum, defined at national level.

3.4. Digital technologies in the curriculum

The Digital Strategy for Schools 2015-2019 Enhancing Teaching Learning and Assessment summarises the information to address 3.4, 3.5 and 3.6. Information can be found here.

3.5. Students' digital competence

No information provided

3.6. Assessment of digital competence

No information provided

4. DIGITAL LEARNING RESOURCES AND SERVICES

4.1. Digital content development

'Scoilnet' is a nationally moderated online platform where teachers can share resources which they have created. Content is also added to this site by full time employees of the PDST Technology in Education Team, who ensure that topical content is included which can be used in classrooms. Importantly, this site also provides links to other national initiatives and useful resources which teachers find invaluable in planning their lesson content.

Teachers also find **'Duchas'** a fantastic national resource when pupils are engaged in online learning. This site allows teachers and pupils access to an online project which aims to digitise the National Folklore Collection of Ireland, one of the largest folklore collections in the world. Material from 26 counties can be located in the School's Collection, with teachers adding to its content regularly.

Another very important open access resource for teachers which has been generated by the PDST Technology in Education team is a **collection of good practice videos**, viewable here. This repository allows teachers to see how ICT has been effectively embedded in Teaching, Learning and Assessment across a wide variety of subjects and activities.

'Threads' is another national digital initiative of note. This is an online space where students can store and share their multimedia oral history projects, promoting peer-learning. The site is moderated by the student's teachers as they must upload their project to their teacher's account before it is published on the main page. This site can be viewed here.

4.2. Content sharing and creation

As noted above, 'Scoilnet' constitutes the most important portal for the sharing and creation of resources between teachers in our country. This site is maintained by employees of the PDST Technology in Education team who ensure that the materials uploaded are relevant. They also incorporate features

to improve the site and look for quality websites/ external resources to bring to teachers' attention.

Also, 'Threads' and 'Duchas', as outlined above, would embody important platforms in this regard.

4.3. Accessibility for learners with disabilities and social inclusion

In Ireland, we have national bodies charged with the task of ensuring that pupils with special needs acquire the assistive technology/ other resources that they require. The Special Education Support Service (SESS) would be instrumental in this regard, guiding schools through the application process and issuing the finance to allow schools to purchase the assistive technologies/ digital resources required.

In more general terms, each school receives grant money for each of the 5 years that the current Digital Strategy for Schools will run (2015 – 2020). This money can be spent on ensuring that pupils in a school have access to the digital learning resources they require on a whole school or more specific class by class basis.

Moreover, schools can apply for advisory school support from government bodies to aid them in gaining access to relevant digital resources. If there is a pupil/ group of pupils with a specific need, the SESS can advise the school on how best to proceed. If the query is in terms of how to embed digital technologies more effectively for all learners in the school/ class, the PDST can provide an advisor from the Digital Technologies for Teaching, Learning and Assessment team to visit the school and work with the teachers towards this aim.

4.5. Learning Platforms

In Ireland, schools have autonomy in terms of decisions about how to allocate their funding and can choose the resources that best align with their needs. In the case of learning environments, management systems, etc. this means that such investment is undertaken at school level in line with the schools Digital Learning (or eLearning) plan. The PDST_TiE provide advice and support to schools in this area. This means that there are a number of platforms (referenced throughout this document) in use.

5. TEACHER EDUCATION FOR DIGITAL LEARNING

5.1. Assessment Schemes

The Digital Learning Framework for Schools is now available, and being trialled in 50 schools in the 2017 to 2018 school year. Further information here.
Currently in use, as previously mentioned, the PDST have devised a suite of widely utilised materials that support teachers and schools in assessing their own digital competence, as well as allowing them to situate their schools progress in this regard. This comprises a set of resources to aid teachers and schools in situating their progress in 5 key areas; Leadership and planning, ICT in the curriculum, Professional Development, Digital Learning culture and ICT infrastructure. The aim of this it to assist schools in developing a Digital Learning Plan to outline their future aims and objectives. There are a number of supporting documents to help school here, such as action plan templates and examplars of good practice. These documents are viewable here.

5.2. School leader support

School Leaders have access to a range of resources to help them in designing and implementing a digital education strategy for their schools. As noted above, currently school leaders are using the eLearning planning suite of resources constructed by the PDST which aim to help schools plot their current position in terms of their digital competence and the roadmap also suggests future objectives they may wish to achieve.

School leaders will have access in the coming days and weeks to view the new Digital Learning Framework for Schools that will be released by the Department of Education. This new resource will map on to the work that schools are already doing in terms of engaging in a self-evaluation process, allowing them to easily devise a digital education strategy in tandem.

School leaders may also apply to the PDST for an advisor, specifically from the Digital Technologies for Teaching Learning and Assessment team, to visit their school and work with them to aid the school in developing their digital learning plan.

5.3. Digital technologies in initial teacher education

Digital technology is compulsory for student teachers, in line with course content approval by the Teaching Council of Ireland.

5.4. ICT in in-service teacher education

Incentives are in place to encourage teachers in service to follow ICT training and take-up, for example, a number of days off during the school year to facilitate the take-up of summer courses during holidays, and in-service training.

5.5. Training the Teacher Trainers

Several third level institutions offer such training to qualified teachers, including Bridge21 in Trinity College Dublin, also the PDST train teachers as tutors to delivery some of the CPD content throughout the year, while those teachers are also employed in schools.

Studies on digital technologies in school education

2013 ICT Census In schools can be found here

Teaching and Learning in Second-Level Schools at the Advent of High-Speed Broadband can be found here

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