



Digital Literacy and Education

Report by Country

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Country Ireland

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1. DIGITAL LITERACY - BACKGROUND

a. Can you identify the main concepts around Digital Literacy (DL)?

As a term, **Digital Literacy** is widely used to mean many different things, ranging from traditional concepts of literacy applied in a new medium to a more diffuse construct that subsumes many other cognitive and technical skills. [Digital literacy: the National Digital Strategy](#) (2013), which is the most comprehensive recent government policy strategy, incorporates concepts such as coding and programming, computational thinking, logic, and critical thinking into the concept of Digital Literacy (DL). Phase 1 of this strategy builds on three platforms: Business and Enterprise, Citizen Training and Schools and Education.

The [National Council for Curriculum and Assessment](#) (NCCA) explains **digital literacy** as follows: *In studying digital media, students learn to use digital technology, communication tools and the internet to engage in self-directed enquiry. As students develop their digital literacy skills, they improve their capacity to know what they are looking for, what information to ignore or discard and how to identify what can be useful or significant. They learn to discriminate between the multiple sources of information available online and to challenge the views they find there. They learn how to create, collaborate and communicate effectively and ethically (p6).* The vision articulated in the [Digital Strategy for Schools](#) (2015-20), published to support the National Digital Strategy is to “realise the potential of digital technologies to enhance teaching, learning and assessment so that Ireland’s young people become engaged



thinkers, active learners, knowledge constructors and global citizens to participate fully in society and the economy” (p. 5).

Related terms that emerge prominently across these strategy documents and related documents are:

Digital media literacy. Digital media literacy in an educational context incorporates a range of skills grouped by the National Council for Curriculum and Assessment under eight headings: Being literate (e.g., exploring and creating a variety of texts, including multi-modal texts); Managing myself (e.g., using digital technology to manage myself and my learning); Staying well (e.g., being responsible, safe and ethical in using digital technology); Managing information and thinking (e.g. using digital technology to access, manage and share content); Being numerate (e.g., gathering, interpreting and representing data); Being creative (stimulating creativity using digital technology); Working with others (e.g., developing good relationships and dealing with conflict); and Communicating (e.g., using digital technology to communicate).

Digital engagement (i.e., being actively engaged in on-line digital media, in comparison to 'non-liners')

Digital capacity: the skills, competencies, attitudes, infrastructure and resources that enable people to work, live and learn in a world that is increasingly digital ([National Forum for Enhancement of Teaching and Learning in Higher Education, 2015](#))

Digital citizenship incorporates a sense of belonging to a wider community, with the obligations and opportunities that represents. Citizenship implies ethical and responsible use of digital media. Widely recognised as representing both opportunities and concerns, questions of data protection, privacy and surveillance are all incorporated into this construct of citizenship. Within the educational sector, many initiatives have emerged to support responsible online behaviour in a global digital society, (e.g., [Computers In Education Society of Ireland](#)), promoting awareness of issues as diverse as copyright requirements, digital footprint, online identities and social networking, as well as challenges such as cyberbullying, sexting and strategies for dealing with inappropriate content.

21st century skills: The above skills are linked to a broader construct of **21st century skills**, frequently mentioned in education-related strategy documents, to capture those skills that prepare students and citizens to live and work in a digital society – to be effective and responsible global digital citizens.

Information and Communication Technologies (ICT): Key concepts in relation to ICT that seem to emerge across policies is that meaningful ICT integration is the responsibility of all stakeholders and is a key component of a high-quality 21st century education system – recognising the significant implications of this vision in terms of the need for for teaching support and Continuing Professional Development.



ICT integration: The concept of ICT integration implies that ICT is not simply physically present in the classroom, but is embedded into school culture ([Digital Strategy for Schools, 2015](#)) and so is integrated across all layers of school activities.

Other concepts that feature prominently include:

Digital media: a broad term covering a range of personal, commercial, educational and entertainment domains across digital platforms

Digital government: a gradual transformation of government and public services to migrate public engagement online, away from traditional counter-based service provision. For example [MyGovID](#) gives citizens a Public Services identity allowing access to revenue and social service benefits through digital platforms, as well as passport and driving license applications.

Coding: skills in writing program instructions compatible with a computer processor. Regarded as one of the foundational skills, curriculum initiatives in coding are spreading across post-primary and primary education levels ([Action Plan for Education 2016-2019, DES, 2016](#))

Computational thinking: high abstract reasoning and creative skills, the study of problems in computational terms, focusing on what can and what cannot be computed, and why (Lockwood & Mooney, 2017). Skills in computational thinking are essential to enable the carrying out of tasks that are resistant to automation.

b. Historical perspective

The Irish Government has recognised the importance of digital literacy with various strategies since the late 1990s. These strategies include the [Schools IT2000](#) plan, which was introduced in Ireland in September 1996 in line with the “Learning in the Information Society” initiative, an EU Action Plan introduced by commissioners Bangemann and Cresson in July 1996. The IT2000 was introduced as a part of an action plan for the new millennium, at a time when Ireland was ranked as number 23 by the International Data Corporation (IDC) in terms of its state of preparedness for the information age. The IT2000 plan proposed four main reasons for integrating ICTs into the Irish school system. Firstly, the plan recognised the potential social benefits that a computer literate society could gain, as well as the possible dangers that could be the result of a two-tier society of information haves and have-nots. Secondly, the plan also recognised the potential vocational and economic benefits that could be created through promoting the use of Information and Communication Technologies (ICT). Thirdly, IT2000 supported pedagogic reasons for adopting ICTs in the classroom through providing rich, entertaining, and motivating environments for learning. Lastly, the plan suggested catalytic reasons for ICT integration, as the use of computers could increase positive trends, such as active learning. In this way the first concepts of digital literacy and its importance were introduced to the Irish context in 1996.



Suggestions from the IT2000 plans were implemented in the Department of Education and Skills' (DES) 2008 Digital Schools Strategy where the need for the ability to communicate digitally in order to function in society was recognised, and ICT integration in the school system was seen as essential. Schools were provided with internet access and it was suggested that there be at least one computer and interactive whiteboard in each classroom.

The introduction of the National Digital Strategy in 2013 encompassed education and economic incentives to encourage digital engagement. The strategy includes the National Digital Schools Strategy (2015-2020), which is supported by the National Council for Teacher Education (NCTE). The National Digital Strategy aims to halve the number of people who have never used the internet by December 2016.

The use of digital technologies as an integral part of teaching, learning and assessment is endorsed in all recent educational policies and plans. The National Literacy and Numeracy Strategy (2011-2020) (DES, 2011); Project Maths (NCCA, 2008), Key Skills Framework (NCCA, 2009), Framework for the Junior Cycles (DES, 2011, 2012) and the School Self-Evaluation Programme (DES, 2012) all require that ICT is used as part of student learning.

c. Concepts mapping: cross dimensions in regards to DL

The concept of “digital” was introduced in the National Digital Strategy. It is defined in the National Digital Strategy as *the use of online technology and ICT to enable government, business and individuals to deliver, participate and inform themselves across a multitude of economic and social areas to create jobs and improve productivity, service delivery, and quality of life in its various form* (2013, p. 2).

The focus on digital engagement in this strategy is on people: the strategy aims to ensure countrywide internet access for all members of society (p.6, National Digital Strategy, 2013) and to greatly increase engagement with digital media across society and across the lifespan.

In this way, the concept of ‘digital’ in the Irish context incorporates digital citizenship and digital literacy.

Digital citizenship is seen as a right and a necessity in a ‘connected society’ and broadening citizenship is part of the National Digital Strategy, supported by programmes under the government [Getting Citizens Online](#) initiatives.

Digital Literacy has been included as part of the National Literacy and Numeracy Strategy (2011-2020) for young people to improve national literacy and numeracy rates among Ireland’s youth. Literacy in this scheme is defined as including the ability to successfully use and understand spoken language, print, writing *as well as digital media* (2011, p. 8).

Teachers are encouraged to use ICT in the classroom in dynamic and creative ways through the use of government supported sites, such as [scoilnet](#), which also provides



a platform for teachers to upload their own content and share with their fellow teachers, facilitating digital engagement.

Daly (2015) challenges an operational definition of digital literacy, such as the above, where the digital dimension is simply added to more conventional or traditional understandings of literacy and points to the new and evolving opportunities and demands of multi-media platforms. He describes more conceptual definitions of digital literacy that emphasize meaning-making, such as included in the [Literacy in Early Childhood and Primary Education](#) research report (NCCA, 2013), where digital literacy is defined as “... the skills, knowledge and understanding required to analyse, produce and make meaning with multimodal texts that are disseminated through electronic media” (Kennedy et al., 2012: 64).

Digital Safety: This concept is evolving and is applied differentially across different age groups, but underlying all definitions is the concept of personal safety and security of data, of identity and of personal mental health. There are a number of initiatives to promote awareness of digital safety, including those targeted at parents and teachers (e.g., [webwise](#)) where guides to promote safe digital use for children and teenagers are provided and issues such as [cyberbullying](#), [catfishing](#) and [sexting](#) are defined and explored.

Digital technologies: this multidimensional term encompasses all forms of technology that link to information processing, but increasingly also focused on process automation (software robots), in what are now termed the emerging digital technologies. Linked to digital technologies are concepts such as [smart cities](#) and the [knowledge society](#) (see e.g., [digitaldublin](#)).

Media literacy: The definition of media literacy is controversial and has changed greatly over the past two decades. The most recent policy statement on Media Literacy, published by the Broadcasting Authority of Ireland (2016) describes media literacy as defined by three core sets of competencies. These are the ability to: (i) understand and critically evaluate broadcast, digital and other media content and services in order to make informed choices, and best manage media use; (ii) access and use broadcast and digital media content and services in a safe and secure manner, to maximise opportunities and minimise risks; (iii) create and participate, via media, in a responsible, ethical and effective manner, in the creative, cultural and democratic aspects of society. The report goes on to state that “media literacy is the key to empowering people with the skills and knowledge to understand how media works in this changing environment, to interrogate the accuracy of information, to counter unfair and inaccurate representation, to challenge extremist views and, ultimately, to make better informed media choices. This is especially significant for those who might otherwise struggle to navigate an increasingly noisy media landscape and sound-bite orientated society. In addition, media literacy can help people develop much-needed skills in the areas of creativity and of problem solving in technology-rich environments...” ([BAI](#), 2016; p1)



Digital Maturity Scorecard: an [analytic tool](#) developed as part of an initiative to enhance and track embedding of digital technologies into urban spaces.

ICT: Information and Communication Technologies is a term used in manufacturing and service industries as well as across a range of other domains, including pedagogical contexts. The National Digital Strategy endorses a definition of [ICT](#) as “a diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information”. In relation to the manufacturing sector, for inclusion in the ICT sector, the products of the industry must be intended to fulfil the function of information processing and communication, including transmission and display, and they must use electronic processing to detect, measure and/or record physical phenomena or to control a physical process; for service industries, ICT products must be intended to enable the function of information processing and communication by electronic means.

d. Cross geographies: how the policy in your country is cross-referenced to other EU countries?

Ireland is engaged in many on-going international schemes for the promotion of literacy including digital literacy. These include:

- [NMC Horizon Report 2015 K12](#) edition
- UNESCO Teacher Competency Framework. The Teaching Council policies on teacher education recognise the role and potential of ICT to enhance teaching and learning, within a structured framework, including the [UNESCO ICT Competency Framework for Teachers](#).
- The [PISA Framework](#), which now incorporates computer-based assessment. Irish students were assessed on their collaborative problem-solving skills using computers in 2014 for the first time.
- [Digital Pathways](#)
- [Living Schools Lab](#) (2008)

This last pan-European initiative has taken place in 12 countries. Six schools in Ireland have taken part, three post-primary schools, and three primary schools around the country. Teachers in the schools involved are able to share the most effective methods for integrating ICT in an educational environment. Through sharing best practice, teachers are able to gain an understanding of what others are doing, why they are doing it, and how they have managed to introduce it in the classroom. This encourages innovative practice and helps to generate new ideas, thus benefitting digital literacy. With regards to the schools involved in Ireland, there is one Advanced School, where technology is embedded in teaching and learning across the whole school, and two Advanced Practitioner schools, where technology is embedded in “pockets”, where only one or two teachers make innovative use of ICT in the school.



e. Is there any legal policy framework?

The legal framework focuses primarily on right to privacy, ownership of intellectual property and similar concerns addressed in the Data Protection Act, governing all data, including digital data, but there are many areas of uncertainty, changing attitudes and new court rulings related to this aspect.

Many of the policies to foster digital engagement do not have legislative frameworks. The key recent policies are the [National Digital Strategy](#) (2013) and the [Digital Strategy for Schools](#) (2015-20)

Phase 1 of the National Digital Strategy (2013-2016) aims to facilitate an increase in digital engagement by the Irish Government and Irish citizens in economic and educational fields. This scheme has been implemented to address the growing digital contribution to Ireland's GDP, which at the time of the scheme's publication was growing at 16% per year. The National Digital Strategy aims to reduce the number of non-internet users or "non-liners" by 50%, by the end of 2016. This Government strategy attempts to increase online engagement in Ireland through the promotion of online trade with a successful "trade-on-line" voucher scheme, awareness campaigns, and the provision of a skills base through the Irish Digital Association (IDA). Also as part of this strategy was the introduction of a training grant scheme that funds digital skills training for citizens, as well as an [online mapping resource](#) to identify digital learning opportunities.

The [Digital Strategy for Schools](#) is part of the National Digital Strategy. This five-year programme aims to maximise the use of ICT to enhance teaching, learning, and assessment at primary and post-primary level.

The strategy focuses on facilitating improvements to the educational experience, including enabling teachers to bring real-life learning scenarios into classrooms via online access to rich media. It aims to allow teachers to become more flexible and innovative in how they access and deliver curriculum, while engaging students more deeply through the use of online interactive content and enabling them to learn new skills.

This strategy attempts to further the use of ICT in the education system through the provision of professional development and eLearning initiatives for teachers, the development of an ICT strategy for schools, a revised framework for school's junior cycle that includes ICT, and initiatives inside and outside the school environment that promote the development of digital skills (Department of Communications, Energy, and Natural Resources, 2013, p. 2-3). Digital Literacy is embedded in the learning outcomes for junior classes in the primary curricula (DCENR, 2013, p27). With the revisions to the senior cycle, the NCCA aims to include 5 skills, information processing; critical and creative thinking; communicating; working with others and being personally effective, with elements of these key skills include digital ones (e.g. Presenting information using a range of ICT) (DCENR, 2013, p.29)



A related strategy for young people is the [National Literacy and Numeracy Strategy](#), launched by the Minister for Education in 2011-2020. Another government policy is the [ICT Skills Action Plan](#) with a specific focus on increasing places available in ICT courses in Higher Education, a policy that is driven by the Higher Education Authority, an executive branch of the DES with responsibility for funding allocation across the Higher Education Institutes

f. Curricula: which levels of education are included or covered by the digital literacy policy?

By label and by age, to enable cross referencing

Primary (4-12)

Post primary (12-18)

Third level (18+, Levels 5-10)

Erasmus+

Adult learning

Primary and Secondary School context:

The digital literacy policy that is included in the Digital Schools Strategy (see above) covers both primary (4-12) and post-primary (12-18) students through its integration of ICT in the school environment as well as through initiatives inside and outside of schools to promote the development of digital skills (2015). This strategy also provides for further teacher training in ICT through the [National Council for Curriculum and Assessment](#), which extends to include Adult Learning.

The Literacy and Numeracy scheme (2011-2020) prioritised the role of digital literacy and digital media to support the development of digital literacy and numeracy skills in the Primary learning experience (interim review, p. 19).

The DES [Framework for Junior Cycle](#) (2015) sets as a key learning goal that students in the Junior Cycle (aged 12-16) will learn to use technology “and digital media tools to learn, communicate, work and think collaboratively and creatively in a responsible and ethical manner” (p.6) and implements a number of short courses (100 hours of student learning) for students in the junior cycle, including courses in Coding and in Digital Media Literacy, which are assessed through Classroom-Based Assessment. Currently, coding is an optional short course in post-primary, but it is planned that it will also be introduced in the primary school cycle shortly.

Further Education and Adult Learning:



With regards to Adult Learning, the DES, through the Further Education and Training Authority ([SOLAS](#)) strategy (2014-2020) includes digital skills and literacy/numeracy skills as an important part of continuing education, training, and skill development for employees (p.52). In addition to this, the Dept of Communication Energy and National Resources created a BenefIT training grant scheme as part of the [National Digital Strategy](#) (NDS) to promote digital up-skilling and re-training for small businesses and citizens to increase Digital Literacy.

The National Adult Literacy Association (NALA) provides certificates of competencies through www.writeon.ie for literacy, including the improvement of digital skills and digital literacy. The Higher Education Authority provides [guides to further education](#) Level 8 opportunities focused on digital and ICT skills.

Adult learning is also covered by the NDS in the business sector, with an online voucher scheme offering grants to promote online trading and website development. Additional training in technology for adults is also covered by this part of the scheme. The Higher Education Authority agency FAS provides a large number of online and blended learning courses targeting specific skills gaps in the labour market. [FAS eCollege](#) is the national online learning provider that delivers online courses for free for 12,000 unemployed learners annually as of 2013 (National Digital Strategy, 2013).

Other comments

[INTO](#) (Irish National Teacher's Organisation) runs a newsletter in association with Professional Development for School Teachers that features articles on including ICT in a classroom environment in an effective manner.

2. SCOPE

a. Stakeholders

The most visible influencers of policy are the [Department of Education and Skills](#) (DES) and affiliated associations (NCCA, PDST, SOLAS), as well as the Department of Communications, Energy and Natural Resources (DCENR)/ Department of Communication, Climate Action & Environment ([DCCAE](#)). The most visible people referenced in the policies published by these governmental departments are the citizens of Ireland, due to the fact that government policy is aimed at increasing the use of digital technology by Irish citizens. Policy aims to increase digital engagement and digital literacy through reform in education, impacting students and teachers, and parents as well through initiatives inside and outside the classroom. In this way, policy influences Irish citizens in many ways so as to increase digital engagement in order to prepare Ireland for life in the digital age.

Further influencers are:



[National Teaching Council](#) (as the regulatory body responsible for monitoring of teacher education and maintenance of professional standards). The Teaching Council is critical to ensuring that teacher skills are developed and maintained in a way that ensures children receive access to the education (including digital education) opportunities that can prepare them to participate fully in the knowledge society. St Patrick's College Educational Research Centre, the primary research site for collating research on education in Ireland
Academic researchers across all the Higher Education Institutes
Agencies affiliated with the Dept of Education and Skills, such as the [National Council for Curriculum and Assessment](#), and the [PDST-TiE](#).
Agencies affiliated with the Dept of Communications, Energy and Natural Resources: ([PDST](#), [NALA](#), [SOLAS](#))

Given Ireland's high dependency on the IT sector, it is likely that the industry is also a significant influence, although not as transparently visible in the policy documents. However, the Irish Development Authority ([IDA](#)) and Enterprise Ireland ([EI](#)) are both key stakeholders promoting enhanced digital skill development at all levels, but particularly in second and third level education contexts, to meet industry requirements and support growth and employment. Ireland is heavily reliant on ICT industry, and so keeping pace with demand for digital skills is critical to the economic health of the country.

Visible Stakeholders

- A range of different stakeholders are visible across policy documents. These include:
- Students
- Parents/Guardians (ICT is seen as offering new opportunities for parents to become more actively involved in their children's learning because of the connectivity of home and school), encouraged through the [National Literacy and Numeracy Strategy](#) (2011-2020) (DES, 2011).
- Teachers
- Schools
- Higher Education Institutes who engage with teacher education, so that use of ICT for teaching, learning and assessment is embedded at each stage of the continuum of teacher education
- Information Technology Education Providers
- Education Centres
- Office of Government Procurement (to meet the hardware requirements across schools)

b. Special needs education policies

The [Integrated Reform Delivery Plan, Education and Training Sector](#) 2015 (DES, 2014) states: *"We want an Education and Training system that welcomes and meaningfully includes learners with disabilities and special educational needs, learners from disadvantaged communities/backgrounds and those with language, cultural and social differences"*



Implementation of this policy requires that information should be accessible to all learners, in line with the [UN Charter of Rights for Persons with Disabilities](#). There are many ways in which digital literacy can enhance the educational opportunities and social participation of individuals with special educational needs. Supports are offered through the PDST for using ICT effectively in the classroom and reasons to use ICT for the education of children with special needs. Creative application of ICT can allow students at risk of early school leaving to connect with learning in new ways, resulting in improved motivation, attendance and retention. The internet has been suggested to be useful for students with special education needs, due to the fact that it gives access to resources appropriate to the pupil's learning needs and dictate the pace of their learning (PDST, 2013). Daly (2015) points out that for students with moderate general learning disabilities, who may struggle with abstract thinking, digital media "offer avenues for more abstraction, leading to more developed meaning from the development of symbolic understanding" (p.7). In particular, ICT and digital media offer access to language and communication through their multimodal platforms that may be of particular benefit to individuals with cognitive and physical disabilities.

However, the National Digital Strategy (DES, 2014) has been criticized for the extent to which the needs of individuals with moderate, severe or profound learning difficulties were largely overlooked (Daly, 2015), in part due to the influence of external benchmarking (e.g., PISA) focused on skill attainment. Daly (2015) proposed a [Digital Literacy Framework for General Learning Disability](#) developed from work undertaken by the Special Education Support Service (SESS), within the context of the National Digital Strategy. The framework's genesis was an initiative by SESS to support the teaching of literacy, using tablet technology, for students with moderate and severe/profound general learning disabilities within the context of the [National Literacy and Numeracy Strategy](#) (DES, 2011). The framework addresses six domains of competence: accessing managing, integrating, collaborating, creating and communicating using digital literacy. The framework elements represent a hierarchy of progression from functional digital skills to meaning-making to communication and participation.

Currently, this framework is available, but is not yet integrated into policy.

c. Contests to support DL

A range of different contests has been created to support digital engagement, primarily targeting primary and secondary school ages. In addition to these contests, there are volunteer initiatives to support young people of all ages to engage creatively and in a fun way with digital activities. The largest of these volunteer organisations is the [CoderDojo Foundation](#) headquartered in Dublin, with over 260 sites nationally where young people can come to develop their digital coding skills.

1. Digital Schools Award (NCTE Advice-Support handbook) This accreditation programme which primary schools can attain by demonstrating excellence in their approach to the integration of ICT in learning and teaching. The benefits of receiving



this accreditation include access to an ICT support network, a toolkit to develop an ICT plan for every school, links with other schools in Ireland and external recognition through a nationally recognised award - See further at the [Department of Education and Skills](#)

2. Safer Internet Day 2016: 'Play your part for a better internet': 67,342 pupils in 463 primary schools around Ireland held events and campaigns on 9th February to promote safer use of the internet by their pupils. There were free wristbands for everyone who took part. The winning school won a GoPro Camera Kit for the school, and the runners-up won a Fuji Instax camera.

3. Fís: a film project for primary schools that explores film as a medium of expression and introduces children to aspects of the film-making process, while also supporting the aims and objectives of the primary school curriculum (www.fisfilmproject.ie). A collaborative venture with the Irish Film Institute, the Institute of Art Design and Technology and the Dept of Education and Skills and the PDST Technology in Education, it is run annually to develop essential skills in image literacy, communication and teamwork.

4. Dept of Communications, Climate Action and Environment: School Digital Champion initiative aims to promote and elevate digital skills and competencies through student participation in digital projects.

5. Fís book club: this online interactive book club enables children to share their book reviews online with peers.

6. Future Creators: This initiative gives a number of young people from disadvantaged areas the opportunity to develop digital media skills in association with the National College of Art and Design with the goal of promoting a career in digital media and technology.

d. Evaluation/Assessment mechanisms

Given the range of definitions of digital literacy, it is not surprising that formal assessment approaches to evaluating digital literacy skills are still in their infancy. There are many informal avenues, including those visible through competitions within schools at all levels, as well as those associated with computer coding clubs, technology camps and special initiatives, including the Young Scientist of the Year competition. One well-established informal assessment mechanism is through the [H2 Digital Hub Development Agency initiative Digital Pathways](#). This international project with partners in Poland and Germany aims to provide teenagers across Europe with opportunities to develop a range of digital literacy skills; to provide them with a virtual space to showcase their work and to network with peers; to expose them to the wide range of possible careers in this evolving sector and to identify pathways they can follow into further education and future employment in the field of digital media. One of the project work packages has been the development of a Digital Pathways programme, that develops a range of digital skills.



Formal:

Although still emerging, formal assessment of digital literacy skills are gradually being incorporated into the State Examination process through the introduction of digital literacy and assessment of ability to read digital media into the Junior cycle of post-primary education.

Many post-primary schools also offer students the opportunity to complete the International Computer Driving License programme during the Transition Year cycle.

For adult learners, the National Adult Literacy Association offers a [Certificate of Digital Competency](#) for people who feel less confident in their literacy and numeracy. There are two levels of courses that can be undertaken, both use a mixed method approach with an online course and a face-to-face tutor available.

e. Rights

Much of the attention to rights focuses on the right to participate equally in a digital society, on rights to privacy and safety and on [rights in relation to data](#). At times, there are potential conflicts of rights: for example, rights to free access to the Internet may collide with rights to block harmful sites in order to protect those using the Internet. Initiatives promoting digital safety emphasize the rights of all individuals to be treated with respect (e.g., Webwise) and to be protected from cyberbullying. Data protection rights represent a constantly changing landscape. There have been several high-profile cases brought by the Data Protection Commissioner against corporations such as Facebook in relation to data of users.

f. Identifying initiatives promoted by private companies

H2 learning: H2 Learning promotes itself as a professional services organisation, providing a range of services in the area of ICT and education using information communication technology (ICT) to enhance teaching, learning & assessment in formal education.

Cliste: Computer Literacy and Internet Skills through Education: offers a wide range of resources, including an ICT curriculum for junior schools for teaching internet and digital skills.

CoderDojo: a worldwide movement of free volunteer-based computer programming clubs for children and young people aged seven to seventeen. The philosophy of CoderDojo is that an understanding of programming languages is increasingly important in a digital age, that it is both better and easier to learn these skills at a young age and that nobody should be denied the opportunity to do so.

Other comments

One of the challenges in capturing data on digital literacy landscape in Ireland is the diversity of activities, the wide range of stakeholders and the diverse use of terminology. While clearly there are many initiatives focused on commercial opportunities, the key focus in this review has been on the educational sector and social participation initiatives.



3. FUTURE

a. Recommendations/Challenges

There are many challenges identified in the resources surveyed for this report.

1. One key challenge relates to ICT Infrastructure, including availability of Broadband and improved connectivity for primary schools, financial support for purchase of equipment by schools, guidance and advice for purchase of equipment and services and guidelines on innovative and effective use of ICT (DES, 2008). Although much has changed since this 2008 report, with overall ICT infrastructure levels close to EU averages, (Butler, Leahy, Shiel & Cosgrove, 2013), there is an ongoing need for effective and efficient equipment procurement strategies across the educational sector to streamline hardware and software purchase and maintenance.
2. Despite the many advances, robust wifi networks are not available in all schools, and in particular in primary schools, limiting the access of students on a geographical basis. There are also challenges related to controlling access to wifi, to ensure appropriate use and effective learning.
3. External technical support and maintenance of ICT equipment continues to be a challenge (Butler et al., 2014)
4. Support for bridging the digital divide across socioeconomic groups remains a critical need. The global recognition of the changing digital environment of even very young children has led to initiatives such as Bring Your Own Device (BYOD) to support improved learning outcomes. However such initiatives and strategies may highlight the digital divide across socioeconomic groups (Lonergan, 2014; PDST, 2017)), with some children unable to avail of the learning opportunities unless schools are resourced to enable them to offer devices to all children. The PDST recommends that a 'school readiness' review is carried out prior to implementing any such initiatives, to ensure that inequality and digital divide issues are minimized, that teachers are prepared sufficiently, have suitable wireless and broadband access and that the school has a well developed Acceptable Use Policy.
5. Data security as cloud computing evolves
6. There is wide recognition that the presence of ICT in education is not enough to prompt digital engagement; ICT needs to be incorporated through teaching pedagogy. There is a risk that ICT may be perceived as a solution to educational challenges, rather than simply one (valuable) tool to help students in a meaningful way.

b. (Best) Practices /Case Studies

[Digital Pathways](#)

[Living Schools Lab](#)



Other comments

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5. ESSENTIAL WEB LINKS

- [All Aboard: Digital Skills in Higher Education](#)
- [Digital Hub](#)
- [National Digital Strategy](#)



[National Digital Strategy for Schools 2015-2020](#)

[Digital Strategy for Schools, 2015-2020. Action Plan 2017](#)

[National Digital Schools Strategy ICT plan, 2008-2013](#)

[Fís Book Club](#)

[HEA ICT Skills Action Plan](#)

[PDST ICT in the Classroom](#)

[Literacy and Numeracy Scheme](#)

[NCTE Advice and Support](#)

[SOLAS Further Education and Training Strategy](#)

[H2 Learning](#)

[Cliste](#)

[NALA adult literacy](#)

[Teacher's online resource](#)

[IT2000 plan](#)