

2016

## Digital Literacy: Why It Matters

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### Recommended Citation

Kavanagh, A. and O'Rourke, K. C. (2016) Digital Literacy: Why It Matters.

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# **Digital Literacy: Why It Matters**

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## **Summary**

In the past two decades the internet, email, apps, mobile devices and all associated hardware and software have become firmly embedded in everyday life, to the extent that it often feels that we have had no control over this phenomenon. What are the implications for education?

Primary and secondary students today have grown up with the always-connected life which the internet has enabled. However, the credence given to the idea that this makes them fully comfortable and aware as "digital natives" is misguided. The social implications of the internet society – surveillance and the decline of privacy, cyberbullying and so on – are only now becoming evident. Are our students developing skills for living, learning and working in a digital society? For that matter, do those of us who teach and offer guidance ourselves possess those capabilities? How can we tell?

This chapter attempts to define digital literacy, outlines some of the ways in which guidance counsellors can help students develop their digital literacy, and looks how guidance counsellors can develop their own digital literacy skills.

## **Key words**

Digital literacy, cyberbullying, safety online, child internet use, education, curriculum, guidance counsellors

## Introduction

Consider the following four contemporary scenarios:

1. A student is upset because a classmate has shared an unflattering photograph with classmates via a social media site.
2. An article you have written appears in a national publication; the online comments section attracts anonymous criticism and personal abuse.
3. Out of the blue, you receive an email from an old friend telling you that she has been robbed while travelling abroad and needs you to transfer money to her account immediately.
4. The postman delivers a hand-written letter from your great aunt in the US who is seeking details of the family tree, something which you have promised but have not yet researched.

How you respond to each of these real-life scenarios is at one level a measure of your own digital literacy. In each case it is not so much your use (or non-use) of technology that is important, but your reaction, common sense and ability to respond meaningfully to the situation. In the first three scenarios, your comfort levels with and knowledge of digital culture will indicate your level of digital literacy; in the fourth, digital literacy is not needed, but it could certainly help you in responding to your great aunt's request for knowledge. (We return to these scenarios in our conclusion.)

The information and communication technologies (ICTs) that underlie and facilitate our digital world are disrupting our lives at every level. This disruption is often compared to the changes brought about by the invention of the printing press in the fifteenth century. But the effects of the digital revolution are much more immediate and profound than those wrought by Guttenberg's invention; its ultimate effects – social, political, ethical and intellectual – are still emerging. In just twenty years, popular access to the internet via the world wide web has changed not just our ability to communicate with each other but, through its immediacy, has also changed how we view and interact with the world. It has rendered obsolete not only many of the skills and industries previously central to our society, but is also revolutionising our worldview and understanding of ourselves as humans. Instant communication via apps, video and text messaging have become so firmly embedded in contemporary Irish life that it often feels like we have had no control over it. Personal computers are now being outsold by mobile devices such as tablets and smartphones, and internet access via wifi is becoming ubiquitous in our homes, towns and cities. In mid-2015, there are more than three billion people online worldwide (ITU Telecommunication Development Bureau, 2015), and this is disrupting how people view and participate in civil society, the workplace and education. The uses (and misuses) of the masses of data being generated by such activity is just coming into the public consciousness, as individual users, researchers, governments, for-profit organisations and others seek to access, establish ownership and control it. For the “digital natives” who have been born since the 1990s the pre-internet world is unimaginable, while many of the older generation are still trying to fathom the still-accelerating speed of continual change. In this context, the “ability to find, evaluate, utilize, share and create content” using available technologies and the internet is an essential skill for living in the twenty-first

century (Cornell Information Technologies, 2015). As educators, it is incumbent upon us to ensure that the students we encounter are being prepared by us to live as responsible adults and citizens in the emerging society and evolving workplace of the digital age.

## Digital Literacy

Asking any group “What is digital literacy?” inevitably results in people reaching for their phones or other devices and heading to Google (an action which, in itself, displays an element of digital literacy). The first result will inevitably be from Wikipedia which today (3 July 2015) says that “Digital literacy is the knowledge, skills, and behaviors used in a broad range of digital devices such as smartphones, tablets, laptops and desktop PCs, all of which are seen as network rather than computing devices”. This definition is rather narrow in that it suggests digital literacy is primarily about the ability to use the tools which are connected via the internet. Other definitions point to the skills and ability necessary to use a particular brand or type of software, while Gilster’s (1997) seminal work on digital literacy identifies critical thinking rather than mere mastery of technical tools as the core skill of digital literacy.

Whether you choose to accept the validity of a Wikipedia definition or insist on a more traditional authority such as the *Encyclopaedia Britannica* is again in itself an element of your digital literacy. What is clear is that information previously the preserve of scholars and librarians is now available to anybody with an internet connection, and traditional authority is not only being questioned from without, but is being forced to justify itself from within. Academics, journalists and politicians are being forced to directly interact with and respond to the questions and criticisms of the general public via social media. Such online questioning has extended to the authority of educators, textbooks and the traditional syllabus. Social media sites allow students to publicly express opinions, often anonymously, about their fellow students and to pass judgement publicly about the ability of individual teachers and the quality of their schools. The initial alarm felt in Ireland by teachers in face of sites such as “RateMyTeachers.com” appears to have abated somewhat, but there is no doubt that such sites exemplify the digital-literacy learning curve which has faced all sides: in addition to opportunities for dialogue and empowerment have come the rise of cyberbullying and online stalking, as well as a growing breakdown between public and private spheres of life. With all this in mind, digital literacy might best be defined as “those capabilities which fit an individual for living, learning and working in a digital society” (JISC, 2014).

## Why Digital Literacy is Needed in our Education System

In 2014, the Central Statistics Office (2014a) claimed that 96% of Irish households with two adults and dependent children had an internet connection, and that 86% of Irish people in the 16–29 age bracket used the internet *every day* (just 2% of this age bracket had *never* used it) (2014b). This is in line with a recent study which holds that “internet use has become an integral part of most European children’s everyday lives. The internet has become a primary platform for children and young people to exercise their most basic participatory rights: the right to freedom of expression and information, freedom of organization and participation as well as the right to privacy” (O’Neill & Staksrud, 2014, p. 8). Yet, there is a pronounced disconnect between internet use and the education system in Ireland. Irish children are considerably less likely to access the internet at school than some of their European peers: only 7% of Irish children aged between 9 and 16 access the internet every day at school, compared to 61% of Danish children (O’Neill & Dinh, 2015). According to the Department

of Education and Skills (2014), high-speed broadband was available at all post-primary schools at the end of 2014, but the roll-out is slower at primary level. This is certainly progress, but at local level there is a reluctance to make use of this infrastructure. Irish children report that three-quarters of schools have wifi, but almost half the children are not permitted to access it, while 48% are allowed restricted access only. This contrasts with 56% of Danish children who are allowed *unrestricted* access to wifi at school (O'Neill & Dinh, 2015).

On the one hand, as exposure to technology is so ubiquitous, it can be argued that technology should continue to have a minor role in our schools, which could provide a quiet haven, granting students time to focus on academic matters. And perhaps there is something in this. While the notion of “screen addiction” is contentious, a 2013 policy statement from the American Academy of Pediatrics cited statistics claiming that the average 8- to 10-year-old gets almost eight hours of screen exposure each day, with older children and teenagers getting more than 11 hours daily. A growing acceptance of decreased attention spans as a direct result of near-constant exposure to digital media is evident in both scientific and anecdotal literature, such as Nicholas Carr’s “The Shallows” (2011). Schools, it could be argued, should provide a respite from this cacophony, and teach children self-discipline by focusing on the traditional core subjects of the curriculum. Because digital technologies are so embedded in young people’s lives already, perhaps schools should simply allow students to engage with technology and achieve competence in its use independently of the classroom.

This, however, is to accept the assumptions and myths around young people’s innate digital literacy that Marc Prensky’s (2001) term “digital natives” has in some ways helped to promote, suggesting that those who have never known a time without computers, the internet and mobile phones are naturally expert in using such technology. (On the other side of that divide, the “digital immigrants” who remember a pre-internet world are fated to never share that in-born expertise.)

While it is undeniable that Irish children, as elsewhere, tend to use the internet frequently, the most common purpose for which they use it is entertainment (O'Neill & Dinh, 2015). In fact, most people of all ages use the internet passively rather than as active participants – other than for communication and social interaction, people use it to find information, play games or for entertainment. A 2013 report from the European Commission suggests that teachers are more likely to use ICT as a means to gather information in preparing for classes than they are using digital technologies as part of their actual teaching practices. Many of the technologies being introduced in our schools reinforce this practice – for example, tablet schemes tend to be used primarily as eReaders rather than to promote new ways of teaching and learning. Teachers need to be made aware of how digital tools can be best used to enhance student learning and engagement in the classroom.

The truly digital literate person is one who moves beyond passively absorbing information to actively participating in its creation, and it is this that needs to be incorporated into our curriculum and assessment practices. Students should be encouraged to explore the world beyond the syllabus, to use digital tools and techniques to create new ways of looking at the world and to actively learn from each other in the process. To achieve this, teachers will need to be allowed time and education to achieve the levels of confidence with digital tools and technologies needed to facilitate such practices: in other words, they themselves need to

achieve higher levels of digital literacy. By neglecting to do this, schools may be putting students at a disadvantage, possibly resulting in digital *exclusion* through an inability to participate fully in the evolving digital economy and society. The focus in schools should be on *enabling* students, promoting the development of skills for personal fulfilment, for citizenship and for critical participation in social and economic development. In current society, digital *inclusion* is and must be an important part of the evolving curriculum. An upskilling of teachers in ways to achieve this will be a necessary part of the way forward. As Hague and Payton (2010) put it, “rather than preventing young people from engaging creatively with technology, a focus on digital literacy in the classroom can help them to expand and extend their use of technology for creativity and self-expression and to develop a greater understanding of the complexities of what they’re doing”. Teachers and those involved in developing curriculum need to appreciate this and to respond appropriately.

### **The Role of Guidance Counsellors**

The Digital Agenda for Europe (DAE) seeks to promote digital literacy, skills and inclusion, holding that the European Union (EU) is facing a crisis because of a shortage of employees with digital skills: their research indicates that just over half of the entire Irish population (53%) possesses sufficient digital skills to operate effectively online (Digital Agenda for Europe, 2015). This is surely worrying, and plans for our future society need to be formulated with such statistics in mind.

The EU is actively promoting the potential of ICTs as enablers of innovation, economic growth and progress, and holds that disadvantaged groups should be empowered to overcome digital and social exclusion, contribute to economic growth and fully participate in and engage in the digital economy and society. The Irish education system currently does not have a national strategy to address such issues, and digital literacy does not feature on the curriculum at primary, secondary or third levels. This means that for the most part it is up to individual schools and teachers to decide how to address the issue, if indeed they choose to address it at all. Guidance counsellors can play a role at local level, not only in bringing an awareness of the importance of digital literacy to their fellow teachers but also in bringing an appreciation of its importance to the future social and professional lives of students.

While Prensky’s identification of digital natives and digital immigrants is no longer widely accepted, a digital divide in our wider society and in our workplaces is recognised to exist. This divide is not age-specific and exists between those who understand the implications of digital culture and therefore possess a “digital mindset” and those who do not: many older people possess such a mindset, and many younger people do not. Indeed, a recent German study (Sommer, 2014) found that young people often lack skills in work-based use of digital tools such as spreadsheets and word processing, despite their apparent proficiency in using digital tools for leisure purposes.

The digital divide becomes most explicit in the context of management and leadership, and the consequences of this on the overall digital culture within any organisation. Deficient understanding of modern ICT at senior management level can be displayed in an overall lack of vision, direction and strategy for the digital future of any organisation. In the words of Irish Computer Society CEO, Jim Friars “The digital divide at that senior leadership and authority level can have serious consequences” (Faughnan, 2013).



EU initiatives exist to promote awareness of the necessity of eLeadership, holding that effective eLeaders are capable of leading teams and managing technology systems in ways that achieve both local and global ambitions and demands. Many teachers and those in management positions, in education and other fields, are themselves unsure about such issues. Nor do they fully appreciate the full potential which the digital world can bring to the way today's young people learn. By bringing EU and national policies to the attention of school managers and teachers, guidance counsellors can play a role in raising awareness at local level concerning emerging trends and practices. These can include contribution to policies surrounding the use of digital devices and social media within schools; defining the role of schools and teachers in the students' digital lives; promoting awareness of data collection, retention, ownership and use by the education sector and third-parties; and by promoting a debate about the digital mindset among staff and students alike. The positive impact and potential of eLearning and online courses should not be underestimated, and teachers and management should be encouraged to explore offerings for their own development, including courses on technology-enhanced learning, assessment and teaching practices offered by several established third-level institutions both in Ireland and abroad.

High-profile media stories surrounding cyberbullying and online encounters with strangers have made young people generally aware of the importance of privacy issues and keeping personal information secure online, but research indicates that many 9 to 16 year olds still lack basic safety skills: young people interpret "personal information" in different ways, and privacy practices on social media platforms such as Facebook have been found to be uneven (O'Neill & Staksrud, 2014). Advice on such matters and on the broader ethical use of mobile technologies and social media (including respect for age limitations imposed by such sites) should be a part of the guidance counsellor's toolkit. Students need to be aware that all internet-based activity can be monitored and recreated; that digital data is infinitely duplicable and virtually indestructible; that not every event and action needs to be digitally recorded; and that some opinions and communications may be better delivered in person than digitally. Many employers now use social-media vetting of potential employees, and all online activity – however innocuous and privately shared – has the potential to become part of an individual's public digital identity, with consequences for their future employment possibilities. Stories of individuals who have found themselves vilified as a direct consequence of poor choices regarding social media postings are legion. Identity theft and cybercrime, including phishing scams (attempts to steal personal and/or financial information), need to be brought to the attention not just of young people but of all internet users – as in the real world, if something seems too good to be true then it probably is just that. Moreover, young people should be made aware of the possible long-term effects of extended screen time (including the debate around screen addiction, something which is as yet unproven), and that issues such as compulsive online gambling and online porn addiction are emerging as recognised problems, especially among young men, with consequences for personal relationships and other psychological issues.

Students should also be made aware of the social and political effects of the digital age. From the role of social media in the Arab Spring to the whistleblowing of Julian Assange's WikiLeaks to the plight of Edward Snowden as a result of exposing the levels of US government surveillance, young people need to be made aware of the moral and ethical issues which are emerging as a direct result of our digital culture. Moreover, the role which the internet has played in globalisation and its economic consequences should also be brought

to play, including the consequences for wealth distribution, equality, human rights and democracy.

### **How Guidance Counsellors Can Develop Their Own Digital Literacy**

The past two decades have changed the way we see the world, and it has become a cliché to say that students today are being educated for jobs which do not exist at present and are as yet unimagined, making it difficult to offer full advice on subject and career choices. However, people with the skills and vision to create and control the digital future across all sectors are certainly needed. For example, in order to promote employment in the ICT field, and in jobs which require digital skills, the European Commission created the Grand Coalition for Digital Jobs and Skills in 2013, a multi-stakeholder partnership that endeavours to facilitate collaboration among business and education providers, public and private sectors to take action attracting young people into ICT education, and to retrain unemployed people. Having an awareness of and participating in such initiatives will help to shape the ambitions and vision of the emerging generation. Guidance counsellors should themselves seek to develop their own digital literacy skills, and to familiarise themselves with such initiatives at EU and at national levels.

Guidance counsellors can take a leading role in researching and implementing social media policies for their schools, not simply in isolation but in conjunction with their peers across the sector. For example, given the numerous high-profile examples of cyberbullying that have emerged in recent years, there is a growing onus on schools to reflect on their responsibilities, requiring them to create or update existing social media policies. In many cases, the initial reaction can be to portray digital tools and culture in a negative light, banning usage of devices and prohibiting access to popular online sites. However, better policies can be formulated which seek to define opportunities for positive digital engagement by students whilst simultaneously highlighting the urgent need for all educators to become digitally literate. The availability of free Massive Open Online Courses (MOOCs) on topics such as digital literacy and culture can provide an opportunity for all concerned to become familiar with the current issues prevailing in the area, while the resources listed below have been chosen to assist in providing practical help in addressing, among other things, the common issues of privacy, cyberbullying, and identity protection. Each of these resources in turn provides a wealth of links to further resources that are worth exploring, and offer an opportunity for teachers and students to connect with online communities of practice in Ireland and further afield who are also struggling with the same issues. By becoming actively involved in such initiatives, guidance counsellors can help not only their students but also parents and fellow teachers to understand the digital world.

### **Discussion and Conclusion**

Recognising fluidity as the norm in our society is a key element of digital literacy. Primary and secondary-school students today have grown up with the always-on, always-connected life which the internet has enabled. Fads and fashions change on an almost daily basis, and news and rumour travel around the world at unprecedented speed, unmediated by the traditional gatekeepers of information. With this, the traditional notion of privacy and the norms surrounding personal information have changed beyond recognition, and the voices of authority in traditional media are questioned. The social implications of the digital society – surveillance and the decline of privacy, cyberbullying and so on – are increasingly evident but are not yet wholly realised. In the absence of national policies to develop our students’

skills for living, learning and working in a digital age, it is incumbent on those who teach and offer guidance to develop the capabilities to help these young people along.

People increasingly expect to be connected to the internet wherever they are in the world. But they also need occasionally to take a step back from technology, to maintain a level of social decorum and sense of respect for others, for example, by not checking email or other updates while speaking to others. Young people learn by the examples they see around them, and good digital practices by authority figures at school and at home will influence them. Teachers and guidance counsellors may sometimes feel that their students know more about ICTs than they do themselves, and we should be open to learning from our students where this is indeed the case. But the reality, now more than ever, is that young people need guidance in the areas of treating others with respect, avoiding bullying, being safe and critically evaluating information found online. This is not to view digital devices and communication methods negatively – the possibilities are truly exciting and full of promise, opening up new worlds of human activity and areas of scholarship.

So, returning to the scenarios offered at the beginning of this chapter, in responding to an email from a friend soliciting cash, the digitally literate person is likely to contact the sender by another method: a phone call will usually ascertain that their email account has been hacked, and they will generally be grateful that you have alerted them to this and inform their email contacts accordingly. Critical online comments to a published piece may merit a response and/or an offer to further discuss the topics involved via private correspondence, but the digitally literate person knows that, in the main, abusive comments are best ignored. Students may be upset by a variety of online activity, but not every instance is an example of cyberbullying. While any complaint made by a student should never be ignored, schools which promote digital literacy should have policies and procedures in place to guide teachers on how to respond (both informally and, where necessary, formally), and students also need to be aware of such policies. As to requests for family trees from your American aunt, the traditional route would involve a visit the reading room of the National Library, the Irish National Archives, the UK Public Records Office and other organisations, but if you are digitally literate you can do this from the comfort of your home or office, searching the online records of these or a host of other websites. Alternatively, you could decide to employ the services of an individual or company to do this on your behalf (an online service that students sometimes avail of in order to complete their assessments – and a form of digital literacy that is not generally rewarded in academia).

Whatever your viewpoint, digital literacy matters for education.

## Further information

Childnet. Resources - Childnet. Retrieved from <http://www.childnet.com/resources>

Provides a wide range of resources for children, young people, parents and carers and teachers and professionals.

Childnet. Teacher & Professionals - Childnet. Retrieved from <http://www.childnet.com/teachers-and-professionals>

Provides resources for teachers and professionals for working with young people, for themselves as professionals, and for the workplace

Digital Futures in Teacher Education. (2015). *Open Textbook - An Open Resource on Digital Literacy for Educators, Teachers and Schools* Retrieved from <http://www.digitalfutures.org/>

Discusses various definitions of digital literacy, its development in school settings in the UK, teacher education and digital literacy, and case studies in both school settings and in professional development.

Dublin eLearning Summer School (2015) Panel discussion, DIT, 25 June : "Primary, Secondary & Tertiary: Approaches to the Digital Age". Retrieved from <http://www.dit.ie/lrtc/elearning/elearningsummerschool/pastsummerschools/summerschool2015/elss15videopresentations/elss15panel/>

Includes contributions and perspectives on the digital agenda from three perspectives of the Irish education system, with Deirdre Butler (St. Patrick's College), Michael Hallissy (H2 Learning), Terry Maguire (National Forum for the Enhancement of Teaching & Learning in Higher Education).

Edudemic. (2015). 15 Top Resources On Digital Citizenship for 2014. Retrieved from <http://www.edudemic.com/15-resources-digital-citizenship-2014/>

An American site offering lesson plans about digital citizenship.

MySelfie - Primary Anti-Cyber Bullying -. (2015). Retrieved from <http://www.webwise.ie/teachers/myselfie/>

Aimed at primary school teachers. Includes a downloadable teacher's handbook. Provides lesson plans for 5 lessons relating to students' use of the internet, cyber bullying, responsible photo sharing practices, etc.

Safer Internet Day. (2015). Retrieved from <http://www.saferinternetday.ie/schools/>

Ideas for activities schools could use in celebrating Safer Internet Day 2015. Focuses on responsible photo sharing, social networking practices, Includes a Powerpoint presentation with links to videos supporting in-class activities.

Internet Safety. (2015). Retrieved from <http://www.webwise.ie>

Provided by the Irish Internet Safety Awareness Centre, Webwise is part of the PDST Technology in Education and promotes the autonomous, effective and safer use of the internet by young people. Webwise develops and disseminates resources that help teachers to integrate the Internet safely into their teaching.

## Biography

Allison Kavanagh is College Librarian of DIT's Aungier Street library. Allison joined DIT in 2004, having returned to Ireland from Stanford University's Graduate School of Business's Library. She is interested in digital literacy and librarians' role in fostering its development.

Kevin C. O'Rourke, PhD, is currently Head of eLearning Support & Development at the Dublin Institute of Technology. See <https://ie.linkedin.com/in/kcor1964>

## Acknowledgements

The authors would like to thank Professor Brian O'Neill, DIT, and Dr Deirdre McFeely for useful comments on drafts of this chapter.

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