Issue Number: 3

What Every Teacher Needs to Know About Digital Literacy

E-safety Support

What is digital literacy?

Digital literacy can be defined as: "The ability to locate, organise, understand, evaluate, and create information using digital technology." Digitally literate people can communicate and work more efficiently, especially with those who possess the same knowledge and skills.

Digital literacy is the ability to understand and use digital technologies effectively for everyday tasks. In education this extends to all aspects of teaching and learning, and the usage extends into citizenship, pastoral care and e-safety.

Using digital technology and new media includes:	Within these defined areas here are just a few examples:
Creativity	• Artistic, photographic and film making skills, music production, animation – turning hobbies and interests into useful and career enhancing job skills.
Critical Thinking and Evaluation skills	• Research, judging the validity of search results and websites.
Integrating learning into technology culture and taking advantage of popular trends	• Webinars, social media, video revision guides, school charity, 'viral' videos.
Collaborative learning and web 2.0	• Displaying work online, e-learning, extranets, edmodo.
Technology to facilitate research	• Raspberry pi programming, digital weather stations.
Communicating effectively and safely	• Social media case law, word-processing, layout, print, risk assessment, digital AV use.
E-Safety	• Cyber bullying, child protection.
Functional skills	• ICT qualifications and skills for careers, ability to use ICT in job interviews and in the workplace.

Why is digital literacy important?

Digital literacy is as important a right for children today as reading and writing skills were at the inception of the Education Act in 1850. Whereas writing and reading have been the cornerstones of literacy since modern education began, increasingly, digital technologies are superseding the manual process of writing, and reading is increasingly an activity carried out using digital facilities rather than paper resources.

At the current time it seems inevitable that the usage and reliance on digital technologies will continue to grow. While reading books and paper resources and manual writing remain fundamentally important, this current period in time may well represent a pivotal point in the march towards digital domination. Whether this happens or not, it is key to provide pupils today with the necessary tools, understanding and practice in using digital technologies to ensure they are not disenfranchised from what is a probable, if not highly likely, shift towards technology based literacy.

Digital literacy is key to teaching in order to provide the skills, knowledge and understanding for young people to enter the workplace, further education and higher education. Increasingly, digital literacy is becoming the primary form of information transfer and communication, taking over from letters, phone calls and even face-to-face interaction. Business transactions without face-to-face contact would have been rare twenty years ago. In twenty years from now, perhaps the reverse will be the case.

Pupils need to be taught now which tools are effective and how to use them responsibly. Creative, collaborative and recordable communications techniques are essential for the next generation to interact in social, cultural, economic and intellectual careers and life.

Digital literacy involves using emerging technologies to communicate meaningfully across technology, language, social, cultural and intellectual barriers. Schools need to teach concepts and techniques to allow pupils to work with any digital device, and adapt to new technology quickly using the skills and concepts they have been taught. A variety of devices, platforms and web standards need to be incorporated into the educational experience to ensure pupils are fully literate in digital technology (not simply familiar or proficient.)

Digital cultures – What technologies are young people using and how can they be integrated into teaching and learning?
Schools need to embrace digital literacy and the teaching of ICT concepts as well as skills, to tap into the trends and innovations which capture pupils' imagination.

For example, writing book reviews might seem boring to some pupils, but writing video game reviews might be more appealing.

Teaching precise and concise non-fiction writing can be adapted to include writing effective marketing tweets, Facebook updates, keywording YouTube descriptions and the basics of writing search engine-optimised text for websites. If English homework results in more likes on Facebook and doubles their YouTube views – many pupils will take more of an interest.

A recent study pilloried the lack of Wi-Fi provision in many schools:(www.bbc.co.uk/news/education-21476385)

Not only did the report highlight the centralisation of WiFi in IT suites, and the need to extend provision to all access and subject areas in the school, but it also touched upon how schools can extend digital literacy to pupils' devices. If pupils can use their own laptops, mobile devices, and iPads in school, not only is IT usage encouraged, but the school can monitor for breaches of the AUP more effectively via its own Wi-Fi and traffic logs. A firewall can be used more effectively, the pupils can transfer homework and projects more easily, and skills and concepts taught in school can transfer directly to home simply by the pupils bringing their devices to and from school.

Digital literacy for all pupils, at school and at home:
It is essential that opportunities are provided for all pupils, and ideally, not in situations which are limited to in school use. To garner the maximum benefit from digital literacy teaching, pupils need to be able to use the skills effectively, and of their own volition, outside school.

For example – teaching pupils to use Photoshop is a worthwhile industry standard skill which is not only useful for cross curricular IT skills, but also for job and career prospects. However, it is unlikely all of the students will have access to Photoshop at home. If the Photoshop skills are extended to utilising transferable image editing and manipulation skills in iPhone apps, open source software, and free web applications, then all the pupils will have access, and probably the motivation, to use these digital literacy skills to enhance their own photos, websites, and social media profile pictures. Their skills will develop faster and to a higher standard due to the increased usage and practice – far more so than if the skills are limited to using Photoshop in school computing lessons.

Similarly, when using hardware, pupils need to be made aware of any useful crossover skills. The ability to use a PC is useful – but being able to identify the links and common IT principles to then be able to use a Mac, or a Linux workstation, or an iPad – are more useful skills. Broad IT skills are more useful than specific platform awareness. A pupil's confidence in being prepared to engage with any digital technology is a key objective all schools should embed in ICT teaching.

Cross-curricular digital literacy skills:
Digital literacy is essential for cross curricular writing and research skills. Whereas the school library might have been the first port of call for research 20 years ago, now the Internet is the go-to resource. However, pupils – while they might appear Internet savvy – often find it difficult to gauge the validity and veracity of information presented to them.

It is essential that pupils are taught to be discerning and critical when viewing search results. An understanding of how search results are determined, and also how search results can be manipulated for advertising purposes, is key to pupils developing an understanding and critical judgement of which search results are valid.

Pupils also need to be able to determine which results on the search engines represent original primary source material, and which are comprised of secondary source material. Whether or not the information has been vetted, fact checked, and has been published by a verifiable third party source are also points which students need to be taught.

If students cannot discriminate effectively, then subjective, narrow and opinionated content is likely to be presented as objective fact in pupil essays – which will negatively impact on marks – especially in arts subjects.

There are various ways in which these skills can be taught – in Computing, History and English. Teaching pupils the rules of Wikipedia, and acting as editors, is one unconventional yet effective method.

Pupils also need to understand how and why plagiarism software is used by academic institutions. They also need to be encouraged to check their own submitted coursework using applications such as Turnitin,Writecheck for students and Copyscape, to reduce the likelihood of false positives.

Respecting copyright and avoiding intellectual property and copyright infringement is a skill which needs to be taught effectively in schools. Copyright infringement has serious consequences, whether it is by stealing photographs via Google for use in projects, to downloading movies or music without paying. The principle which defines why copyright infringement is morally and legally wrong needs to be embedded early in secondary education, if not by the end of KS2.

Copyright infringement can have practical implications in schools. Media Studies, film studies, graphic design, photography and art coursework often requires an adherence to licences and use of Creative Commons Licenses if images have been sourced via the Internet. Non compliance could result in lower marks. If pupils' projects are showcased on a school website, the school could become liable if images, music or text copyright has been infringed. A 'DMCA' complaint to Google could lead to the school website being removed from search engines. Recent changes in the law regarding 'small claims' mean a photographer can invoice copyright infringers and file claims using the small claims court. £70 plus costs for each stolen photograph used on a website would be considered a reasonable fee.

Creating strong passwords, texting and emailing responsibly, being aware of the Malicious Communications Act and Communications Act regarding comments on Twitter and Facebook, being aware of preventing, avoiding and dealing with the effects of cyber bullying, are all aspects of digital literacy which affect daily lives both in and out of school.

Digital literacy and the impact on school policies and curriculum:

Inspectors and SLT will look for evidence of ICT implementation in the curriculum. An outstanding school should be looking for evidence that this is having a measurable impact on teaching and learning. Perhaps the best way of achieving this is by ensuring that each instance of implementation of digital literacy into a curriculum subject has a pathway, or extension into extra-curricular activities, pupils' use of IT at home, and functional and careers skills. The greatest evidence of digital literacy skills is being able to show that the pupils use the skills throughout their lives, and not just in school. Displaying evidence in the form of website showcasing, YouTube, Flickr, and school extranets represent useful possibilities.

Increasingly, employers are looking for apprentices and graduates with high level communication and presentation skills. The ability to write a 2:1 standard essay is no longer enough. School leavers need to be able to speak, collaborate, present, explain and persuade. Visual skills – sourcing, selecting and using compelling visual images to enliven reports and presentations; creating and using video and animation to add flair to pitches and explanations; working with words and presenting text as infographics, word clouds and generated calligrams; writing – concisely in a format likely to achieve a high search engine ranking; sourcing, processing and using audio – from voxpops and the spoken word to atmospheric background music for advertising; how to present yourself on Skype and webinars; and how to create and deliver inspiring presentations without relying on PowerPoint slides. These are all skills school leavers need, they are often skills pupils are interested in and motivated to study beyond the confines of the school, and they are skills schools should look to embed in the curriculum.

Why is digital literacy important to teaching and teachers?

Digital literacy is not simply maintaining and developing a familiarity with computers, the Internet and the possibilities afforded by incorporating ICT – it is more about future proofing learning, keeping teaching accessible and relevant to pupils, and extending and embedding key skills and concepts into pupils lives – both in and out of school.