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# Digital Literacy for Primary Teachers

Moira Savage
Anthony Barnett

CRITICAL TEACHING

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# Meet the authors

**Moira Savage**

In 1994 I entered the education profession as a primary school teacher and developed a specialism in information and communication technology (ICT) for learning and teaching. I became increasingly involved in ICT staff development culminating in joining the University of Worcester in 2003 as a senior lecturer in initial teacher training. I deliver computing/ICT modules to both undergraduate and postgraduate trainee teachers. I am also the Institute of Education e-learning coordinator and in 2011 I was awarded a University of Worcester Learning and Teaching Fellowship. My passion is exploring how new technologies can enhance learning. I have been involved in a large number of research projects and regularly supervise undergraduate and postgraduate students carrying out research.

**Anthony Barnett**

I moved into higher education from teaching in inner London and Kent, where most of my early experience was with primary Key Stage 2 though also included some secondary teaching and educational research. Before starting my current post at the University of Worcester in 2000 I was a science and ICT co-ordinator. My PhD is in the area of innovative research methodology. My specific interests in ICT include the role of asynchronous discussion within blended learning approaches to teaching. I'm currently also researching children's involvement in a nursery school setting using Quick Time Virtual Reality and video data collection methods. My current teaching role includes undergraduate and postgraduate design and technology, creativity in foundation subject teaching, educational studies modules focusing on issues in ICT and support for postgraduate specialist ICT students and MA students in a range of subjects.

# Introduction

## Overview of chapters

Digital literacy is becoming an increasingly prevalent term and this book gives a comprehensive and practical overview of what this means for today's teachers and learners. Each chapter explores key terminology, highlights links to the current Teachers' Standards and the national curriculum (summary tables are included in the conclusion). Whatever your current level of technological capability, this book equips you with the necessary understanding of the key issues, suggests areas for professional reflection and highlights ideas for further reading. Whilst new technologies are, by their nature, exciting, the book remains grounded in established principles of good learning and teaching. Successful methods are not abandoned but re-envisaged through digital technologies and services. All decisions to use technology in teaching and learning must be pedagogically driven.

### Chapter 1 Defining digital literacy

The book begins by establishing a definition for digital literacy relevant to you as a primary trainee teacher. Key questions are considered; for example whether we are talking about digital literacy or literacies. Your and the children's role as consumer and author of digital content is explored. Four popular models of digital literacy are analysed and compared in relation to the computing curriculum for Key Stages 1 and 2.

### Chapter 2 Implications for teaching: digital teaching

The chapter reviews established pedagogical principles and considers the role digital technologies play in assisting teachers, in the varied aspects of their role from communicating subject knowledge, assessment, feedback, administration and extending learning beyond the classroom and school day. A comprehensive consideration of technology affordances and pedagogy models is undertaken. Critical questions and case studies will help you develop

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confidence in your own e-learning pedagogy. Topical discussion themes are explored, for example the view of learners as digital natives and educators as digital immigrants.

## Chapter 3 Implications for learning: digital learning

Chapter 3 endeavours to explore the facets of digital literacy from the primary learner perspective, revisiting and building on established theories of learning linked to memory and motivation. An overview of the latest research on technology and engagement is given, for example, multimodal learning and links to memory. Further, the importance of authentic learning experiences is emphasised where learners have a sense of autonomy and ownership.

Digital technologies can offer varied opportunities for personalised learning across the curriculum and can be viewed as scaffolding tools from the constructivist perspective. You will also be challenged to consider whether, and to what extent, you can harness children's enthusiasm for gaming.

## Chapter 4 Information literacy for teachers and learners

Information literacy is one of the topics that people typically think of when discussing digital literacy and indeed it is directly addressed in most models of digital literacy. The Joint Information Systems Committee (JISC) refers to the term *information literacy* directly (2014). Payton and Hague articulate this as the '*ability to find and select information … critical thinking and evaluation*' (2010, p 10). Whereas Hobbs discusses abilities to '*access, analyse and evaluate and reflect*' (2010). Chapter 4, therefore, focuses on the dimensions of information literacy you will need professionally as a teacher and what you will need to teach children.

Information is taken to mean any representation of data including but not limited to: text, graphics, audio, video, etc. Tools and strategies for efficiently locating materials will be discussed; for example, advanced search techniques and sources of online repositories. Approaches for critically evaluating information and sources will be discussed, including identifying the author and particular points of view being conveyed to help the learner consider quality and credibility.

## Chapter 5 Creating content

Creativity might not have been the first element that sprung to mind when you started thinking about digital literacy. Through the analysis in this chapter you can see that creativity is actually a big part of digital literacy. You may need to expand your existing perspective on what creativity means now that we are focusing upon the digital realm.

Payton and Hague (2010) detail creativity as a component of digital literacy: '*the ability to think creatively and imaginatively, and to use technology to create outputs and represent knowledge in different formats and modes*' (p 10).

Belshaw expands that the creative element is about '*doing new things in new ways. It is about using technologies to perform tasks and achieve things that were previously either impossible or out-of-reach of the average person*' (2011, p 212). Hobbs suggests individuals

can '*create content in a variety of forms, making use of language, images, sound, and new digital tools and technologies*' (2010).

Chapter 5 begins with exploring definitions of creativity and how these translate when we are working with digital content in cross-curricular contexts. A range of learning tasks will be identified and options for creating content using a variety of digital tools, off and online, will be discussed. Classrooms vary greatly in terms of what technology is available day-to-day for learners to utilise, and some of the popular items will be identified alongside some simple deployment suggestions (iPads, cameras, voice recorders, etc).

## Chapter 6 Collaboration, communication and networking

The affordances of a networked world include new possibilities for collaboration and communication. The Key Stage 2 computing programmes of study requires that pupils are taught to '*understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration*' (DfE, 2013).

Hobbs discusses people '*working individually and collaboratively to share knowledge and solve problems*' (2010). In an educational context Payton and Hague (2010) discuss children's digital literacy capability as including:

> *the ability to work successfully with others to collaboratively create and share meaning and understanding. To develop the skills of team-work, to be able to work together when using technology and to understand how technology can support collaboration both inside the classroom and in the wider world.*
>
> (Payton and Hague, 2010, p 10)

Chapter 6 covers these dimensions, giving an overview of common Web 2.0 tools including: blogs, wikis, social bookmarking and social networks. Understanding the functionality of tools, advantages, disadvantages and risks, will enable you to match the tool to the appropriate learning and teaching opportunity. Examples are given of both teachers and learners using these tools in different curriculum contexts. Web-based publishing (eg blogs) can provide learners with opportunities to write for a real audience and add meaning to their work.

## Chapter 7 Digital citizenship

If you were to ask the average teenager whether they had ever downloaded a game, music track or video without paying for it you might be surprised by their response. Alongside the wealth of exciting opportunities of being digitally literate you need a professional awareness of digital citizenship and what this entails; for example, an understanding of digital rights and responsibilities.

Digital artefacts, and who has ownership and rights to use them, are a confusing area. You are given some straightforward advice on using and repurposing existing web-based materials and directed to external sources of advice and materials; for example Creative Commons licences. Belshaw highlighted that '*creating something new*' can now involve '*using and*

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*remixing content from other sources*' (2011, pp 208–9). '*Therefore understanding how and for what purposes content can be appropriated, reused and remixed*' is one important element of digital literacy (Belshaw, 2011, p 209).

Generic principles of data security will be discussed and reference made to external sources of advice alongside guidance on what questions to ask in relation to local protocols in place (or not) within educational establishments. For example, how should pupil information be stored?

## Chapter 8 Digital identity and footprints for teachers

The JISC definition of digital literacy contains a direct reference to '*career and identity management*', emphasising the need for individuals to manage '*their digital reputation and online identity*' (2014). Chapter 8 is dedicated to ensuring you are fully aware of how your personal online activities and your digital footprint need to convey your professionalism in line with the Teachers' Standards:

> *A teacher is expected to demonstrate consistently high standards of personal and professional conduct … Uphold public trust in the profession and maintain high standards of ethics and behaviour.*
>
> (DfE, 2013)

This chapter identifies key school policy documents and their indicative content that you must be aware of including, for example, an Acceptable Use Policy. A detailed exploration of what your digital footprint typically consists of, how to limit past elements you may not want to be public and how to build a positive online profile, is contained. Common-sense guidance on protocols for using school and personal equipment for teaching and learning is given to ensure both that your privacy is maintained and safeguarding measures to protect children are adhered to. Unfortunately it is a reality that some teachers become victims of cyberbullying from prior or current pupils or parents. The chapter gives practical advice on how to deal with such situations and sources of support. Hopefully following the suggestions in the chapter for managing your online identity will help prevent this ever happening to you.

## Chapter 9 E-safety and digital safeguarding

Payton and Hague's (2010) model of digital literacy was written with school-aged children in mind and directly addresses the crucial area of e-safety:

> *The ability to stay safe when using digital technologies, such as the internet and mobile phones, and to understand what constitutes appropriate use and appropriate content.*
>
> (2010, p 6)

It is not absent in the other models but less directly addressed from a teaching standpoint; for example, in Belshaw's model these themes would emerge under the *civic* element.

The computing programmes of study at both Key Stage 1 and 2 directly highlight e-safety although the term is not directly used. At Key Stage 1 pupils should be taught to: '*use*

*technology safely and respectfully, keeping personal information private; know where to go for help and support when they have concerns about material on the internet*' (DfE, 2013, p 189). Further at Key Stage 2 pupils should be taught to: '*use technology safely, respectfully and responsibly; know a range of ways to report concerns and inappropriate behaviour*' (DfE, 2013, p 189).

A significant amount of time in the chapter is devoted to identifying and understanding risk and potential dangers. Particular themes explored from a child's perspective are sexual risks, cyberbullying and commercial risks. Tried and tested resources are suggested to assist you in understanding and teaching this essential element of digital literacy. A research-informed overview of children's use of technologies is given, encompassing social networking, instant messaging and gaming, for example. You may be anxious about how to respond should a child make a disclosure and some simple guidance is given here and pointers to ensure you obtain the protocol information you need from your particular setting.

## Conclusion

The concluding chapter offers a brief review of the book and the key issues that have been explored from a primary teacher's perspective. The book finishes by predicting several trends which are likely to grow in prominence over the next few years in primary technology enhanced learning and teaching. Several 1:1 iPad projects are listed for you to explore. The remainder of the chapter offers suggestions for on-going personal and professional development including key organisations, annual events and courses.

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