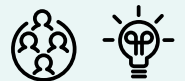


“It’s not chalk and talk anymore”

School approaches to developing students’ digital literacy



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Futurelab
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In order to flourish in ever more digital cultures, young people need to be able to participate in a wide range of critical and creative practices involving technology and media. These practices of ‘digital literacy’ are likely to be important throughout young peoples’ lives as the development of technology and media continues to affect how people work, how they socialise, communicate and spend their leisure time and how they learn and share knowledge.

Digital literacy is therefore coming to the attention of educators as they recognise that not only does the teaching profession have a role in preparing children for a digital world, but that a sustained engagement with technology and media is now integral to the development of knowledge across disciplines and subjects.

This document is the result of a nine-month research project investigating teacher and student experiences of school-based digital literacy interventions. It offers several short case studies which provide an overview of a number of different approaches to fostering students’ digital literacy taken by schools around the country and it offers a thematic analysis of some of the issues involved in developing such approaches.

Digital literacy is a complex and contested term. It is often understood as the ability to participate in a range of critical and creative practices that involve understanding, sharing and creating meaning with different kinds of technology and media.¹ Although not all the schools that participated in this project used the term explicitly, they were all interested in helping their students develop the knowledge, skills and understanding that

would enable them to approach media and technology critically and to develop creative, effective and safe practices when using technology and media.

Method

The research on which this report is based took place between April and December 2010. It aimed to provide insight about existing digital literacy interventions across the country and explore teacher and student perceptions of the impact of digital literacy interventions in schools. Researchers interviewed staff and students from nine schools around the country (four primary schools, four secondary schools and one special school catering to students from 11 to 18). Interviews also took place with several professionals who support school-based digital literacy interventions.

12 teachers, one head teacher and one teaching assistant took part in the research along with an e-safety officer from a Local Authority, and two members of staff from two different City Learning Centres. Six small focus group interviews were also held with groups of between two and eight students (this took place at two schools in the secondary context and four in the primary context, including one with students at Key Stage 1). In total, 23 interviews took place.

Initially schools self-selected themselves to take part in the research by replying to a request for schools that were developing approaches to digital literacy to contact Futurelab. This request was publicised by inclusion in a monthly newsletter circulated to Futurelab’s network of schools, through advertisements on the Futurelab website and through the use of Twitter. The initial group of schools identified in this manner was supplemented by word of mouth recommendations creating a ‘snowball effect’, as well as by Futurelab staff contacting schools they knew were undertaking work on digital literacy. The goal was not to gain a representative sample of English schools but to make contact with schools that are amongst those most engaged in developing digital literacy and therefore to gain insight into some of the existing approaches to digital literacy in English schools.

¹ See, for example, Gillen, J. & Barton, D. (2010) Digital literacies: A research briefing by the technology enhanced learning phase of the teaching and learning research programme. London Knowledge Lab, Institute of Education: 9; the work of New Literacy Studies scholars such as Street, B. (2003) What’s “new” in new literacy studies? Critical approaches to literacy in theory and practice. *Current Issues in Comparative Education*: 5 (2); Barton, D. & Hamilton, M. (1998) *Local literacies: Reading and writing in one community*. London: Routledge and the work arising from previous years of this research project - Hague, C. & Payton, S. (2010) *Digital literacy across the curriculum: A Futurelab Handbook*. Futurelab; Payton, S. & Hague, C. *Digital Literacy in Practice: Case Studies of Primary and Secondary Classrooms*. Futurelab; Hague, C. & Williamson, B. (2009) *Digital participation, digital literacy and school subjects: A review of the policies, literature and evidence*. Bristol: Futurelab.

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Differing approaches to digital literacy raise many opportunities and challenges for teachers, students and schools and it is important that the issues that surround the idea and practice of digital literacy are submitted to critical scrutiny. It was beyond the scope of this report to offer a critical and comprehensive evaluation and discussion of every school’s approach to digital literacy. Instead, this report is designed to provide a swift overview of some digital literacy interventions in UK schools and a brief discussion of some of the most salient issues that these interventions highlight. There is room in further work, then, to deepen and extend the analysis offered here; the study of school-based digital literacy interventions is a developing field which is likely to require the sustained attention of practitioners, scholars and policy-makers both now and in the future.

This report therefore aims to complement the current literature in this area by offering some empirical evidence relating to a number of important issues that have perhaps been under-represented in the field. It is aimed at teachers, head teachers and educational professionals in general as well as educational researchers, academics and policy-makers and all those interested in the issue of digital literacy in English schools. It focuses on the meaning of digital literacy in school contexts, digital literacy and the curriculum in English schools, pedagogy and digital literacy and the impact of digital literacy interventions.

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We would like to thank the staff, students and schools that took part in this project:

Primary Schools:

The Hills Lower School, Bedfordshire
Alderman Bolton Primary School, Warrington
Kibworth Primary School, Leicestershire
Holy Trinity Rosehill (VA) C.E. Primary School, Stockton

Secondary Schools:

Fairfield High School, Bristol
Cramlington Learning Village, Northumberland
Bradfield School, Sheffield
Thomas Tallis School, Blackheath, Lewisham
Seven Hills Special School, Sheffield
Sheffield West City Learning Centre
Sheffield East City Learning Centre

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The term ‘digital literacy’ in school contexts

Very few of the schools that took part in this research used the term ‘digital literacy’ explicitly with either staff or students. Indeed, it was notable that even the schools that contacted the researchers requesting to be involved in the project because of their interest in developing innovative approaches to the use of technology and media for teaching and learning did not use the term ‘digital literacy’. Despite considerable policy and research attention to digital literacy, then, it seems that the term is hardly used in schools, even those that are committed to providing students with the knowledge, skills and understanding they will need to participate in digital cultures.

Many of the educational professionals who took part in the research were concerned that the term digital literacy has the potential to cause confusion because it can be used and understood in multiple ways. One teacher, for example, felt that the term “muddies the water slightly.” When asked what digital literacy meant to them, teachers gave tentative definitions which ranged across a number of possible interpretations. Some offered definitions focused on the purely functional (eg having the skills needed to use technology), some concentrated on using technology to teach Literacy in the Primary context whilst others tended towards more of an emphasis on students actively and critically engaging with multi-modal forms of technology and media and using them to create and share meaning and knowledge.

Quotations from teachers about the meaning of the term ‘digital literacy’

Primary

“I wouldn’t say digital literacy I would more use the term digital learning as that’s our aim for ICT to be embedded across the curriculum, so it’s not just looking at Literacy, it’s looking across all the subjects. But if you say the term digital literacy, I would imagine how we use ICT and technology to support literacy, that’s what I would mean by that.”

“Digital literacy confuses me because I just think Literacy is Literacy and it has elements of digital but it’s still Literacy. Digital is part of Literacy, it’s not necessarily a separate thing.”

“I prefer Multiliteracies. Some people may interpret that as multi-media literacy but I don’t. I recognise it as multiple literacies, signalling that there is more than one type of literacy. Schools have traditionally focussed on print based literacy when really that’s just one tiny part of literacy.”

“I see it as being comfortable and capable of using the technical side of things... but also being able to interact with technology and media comfortably, so you know if you’re literate in something you have an understanding of how to gauge meaning from it and how to interact it.”

“It’s using the digital resources we’ve got available and it’s not to do with literacy as in the writing sense, it’s... becoming proficient in the use of different types of media, interactive text, film, sounds, pictures, all those sorts of things to enhance learning and teaching, that’s kind of the way I think about it.”

Secondary

“Digital literacy to me is not about IT or ICT as such, it’s making sure students have the skills to use all the information that’s around them, whether that’s on computer or off computers, and with more and more ways of getting information like mobile phones... students need to know how to be able to access that information, interpret it, and make sure it’s reliable, and keep themselves safe while they’re doing it.”

“Well we use a term, it’s not so much digital literacy, but ‘information fluency’ is the term we use.”

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The initial definitions offered by practitioners were closely related to the context in which they were working and they found it easier to define digital literacy in relation to their own pre-existing interests and agendas. Primary school teachers, for example, were often attracted to the idea of using digital technology to support struggling readers and writers and saw ‘digital literacy’ as a more engaging way to teach Primary Literacy. Many practitioners focussed on one particular aspect of digital literacy that was important within their own context and their own professional practice. Some teachers concentrated on the use of media texts whilst others were more focussed on e-safety, on developing multi-modal literacies or on supporting students to engage with visual texts.

The differences in the initial definitions of digital literacy are not surprising. Teachers need to draw on their pre-existing knowledge and experience in order to make sense of unfamiliar ideas. This will necessarily involve making use of the sorts of understandings already circulating in particular educational contexts.² Indeed digital literacy itself is a situated practice; it involves understanding a range of situations, tools, spaces, ideas and ways of communicating in relation to very specific contexts and altering one’s behaviour to be appropriate to those contexts.³ Rather than being negative, the ability to take a notion and use it in such a way as it fits in with and contributes to the educational and cultural context of a particular school is part of what it means to be an expert teacher.

This does not mean, however, that the discourses available to teachers when making sense of the notion of digital literacy are always wholly adequate. Indeed the differences in definitions encountered during the research may say more about the sorts of very skills-based ideas about literacy, technology and media in circulation in the English education system than they do about the usefulness of digital literacy as a term. Indeed, throughout the research, the notion of digital literacy was helpful in supporting discussions which moved beyond the issues involved in developing students’ functional skills or simply using technology in the classroom for presentational purposes or to engage and motivate students. Discussions about the idea and practice of digital literacy were useful because they did not bring teachers into direct and uncomfortable conflict with the kinds of skills-based discourses of technology and media-use that dominated many of their school contexts. They did, however, allow teachers to reflect on how they were moving beyond a sole focus on developing skills and beginning to support students to think critically about the use of technology and media, to engage with a wide variety of multimedia texts both online and offline, and to develop practices of creating and sharing meaning and knowledge with media and technology. The real value of the term, then, was not in encapsulating a discrete thing called ‘digital literacy’ but in opening up the debate and the discussion to a consideration of the wide-ranging issues implied by the role of technology and media in society. ‘Digital literacy’ can therefore be regarded as a useful term in the school context despite the wide variations in understandings of the term and its current rarity in English schools.

2 Braun, A., Maguire, M. and Ball, S. J. (2010) ‘Policy enactments in the UK secondary school: examining policy, practice and school positioning’, *Journal of Education Policy*, 25: 4, 547-560

3 Gillen and Barton (2010), for example, draw on the work of Edward Hutchins, Lave and Wenger and the New London group to suggest that digital literacy can be understood as a situated practice in that each “act of ‘digital literacy’ is founded upon a network of practices with sociohistorical antecedents and... only has meaning if it has relation to others’ understandings and activities.” Gillen, J. & Barton, D. (2010) *Digital literacies: A research briefing by the technology enhanced learning phase of the teaching and learning research programme*. London Knowledge Lab, Institute of Education: 8; Hutchins, E. (1998) *Cognition in the Wild*. Cambridge, MA: MIT Press; Lave, J. & Wenger, E. (1991). *Situated Learning: Legitimate peripheral participation*. Cambridge, UK: Cambridge University Press; Cope, B. & Kalantzis, M. (2000) Introduction: Multiliteracies. In B. Cope & M. Kalantzis (eds.) *Multiliteracies: Literacy learning and the design of social futures*. London: Routledge.

Examples of digital literacy interventions in English schools

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This section provides a series of short descriptions of different school approaches to developing students’ digital literacy. These are offered to highlight and showcase some of the digital literacy work that is happening across the country and they raise several interesting issues and challenges, some of which will be considered during the remainder of the report. It was beyond the scope of the research, however, to define what should be understood as ‘best practice’ in the field and to enter into the level of discussion, critique and evaluation that would be required to ascertain whether and why particular approaches to digital literacy can be understood as best practice. These examples, then, should not be read as definitive examples of the best possible approach to digital literacy but instead are accounts, gained from teachers and students, of the sorts of approaches that are currently taking place in English schools that are felt to be positive by those involved. The remainder of the document discusses some of the issues that these approaches raise as well as those that arose in discussions about digital literacy with teachers and students.

Bradfield School, Sheffield

Bradfield School is a medium-sized 11-16 secondary school in Sheffield in the north of England. At the time of the 2010 UK election, citizenship teacher Ben Miskell wanted to find ways to develop students’ political literacy alongside their ICT capabilities. He worked with Sheffield West City Learning Centre to develop a project involving students taking part in mock elections. He explains,

“We planned and prepared campaigns that the students ran, and tried to integrate IT into that, allowing students to film their own Party Election Broadcasts using the City Learning Centre Macs and digital cameras. The green screen chroma key technology really engaged the young people, allowing them to produce outstanding films that really got their message across. The whole thing gave the whole mock election project a real buzz.”

It was important to him to work with the City Learning Centre because it provided valuable opportunities and support that wouldn’t have been available in a timetabled lesson on the school grounds. He was able to take sixty students to the Centre for a whole-day activity in which students were asked to think carefully and critically about how to use digital technologies to create and communicate political messages. The project involved students analysing and replicating the trans-media marketing methods employed by political parties to create effective communication through print and video. It was therefore designed to deepen the relationship between students’ digital literacies, media literacies and citizenship and to make this meaningful and relevant by allowing students to take part in a real-life campaign whilst also engaging in the issues that were being discussed on a national level during the 2010 election.

The Hills Lower School, Bedfordshire

The Hills is a Lower school in Bedford catering for approximately 330 children aged 4 to 9. Digital literacy is not currently a term that is used explicitly in the school but school staff have worked hard to make sure that ICT teaching and learning is meaningful and relevant for students. They feel that this means that ICT teaching needs to be integrated across the curriculum and enable the students to apply their skills “creatively in real world situations” and the school is committed to ensuring that students develop the independence to be able to use digital technologies to communicate safely and effectively across multiple modes, including both verbal and written.

For this reason, they ensure that any use of technology in the classroom is always accompanied with clear objectives and follows a carefully planned pedagogical process. Carol Humphreys, Assistant Head Teacher for Knowledge and Innovation and Year 3 teacher explains,

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“So that’s our job, to make sure that the teaching and the learning, all the planning and the assessment, and the progress, that we can track it, and it’s purposeful learning, so that’s why you saw me building in all that success criteria and saying ‘let’s look at our work, what’s going to make a good instructional video? It has to have this, this and this’ and if the children are building that success criteria together and checking ‘have we done that?’ that really helps all of them to improve.”

This example relates to children working in groups to create ‘how to’ videos to communicate to a defined audience how, in this case, to create a marble painting. This topic-based piece of work was designed to combine elements of Literacy with ICT and Art, as well as developing several components of digital literacy. It allowed children to use ICT as an embedded part of learning how to use instructional language and to communicate well, whilst also developing their creativity and team-working skills and reflecting upon their learning.

Carol Humphreys again,

“What you saw today was excellent because you saw that you can teach them camera skills and you can teach them how to use the software and you can teach them the features and the instructional text but if they don’t have the other skills, the speaking and listening... problem solving, working as a team collaboratively, then the whole thing grinds to a halt.”

Although one objective of this piece of work was to support students’ development of functional ICT skills, the teacher here points to the importance of a broader set of knowledge, skills and understanding without which functional skills become meaningless.

This is also reflected in the personalised learning projects that children take part in at the Hills Lower School. The ICT co-ordinator, Nicky Van der Sander, explains that the key to these personalised learning projects is that children are given choice over both content and the output of the project. “We give them a choice and say ‘how

would you like to share your learning?’... The children take control and show their work.” The children at the school spoke enthusiastically about these projects describing one particular example where they were able to choose between making a video or a PowerPoint presentation to communicate their learning. The primary aim of these projects is to allow children to work in a way which suits their preferred learning style and to communicate about the issues that are important to them, whilst also developing their ability to engage in independent learning and encouraging them to think about what digital format is most appropriate for them to communicate their message.

Several of the children had experimented with their new expertise at home whilst playing with their friends. One student described how she and a friend spent a weekend researching and making a PowerPoint presentation entitled ‘How much poo does an elephant do?’ Another child described how he had ‘made up a dinosaur’ and created a PowerPoint presentation to inform people about it when he was bored at home. This suggests that these sorts of projects are helping to furnish students with skills that they are able to take home and apply creatively in out of school contexts; they are beginning to develop digital literacy practices that enable them to independently make and communicate meaning through their use of digital technologies.

Alderman Bolton Primary School, Warrington

Alderman Bolton Primary School is a 3-11 school in Warrington in the north of England. It is one of a group of eight primary schools that have come together to develop joint creative and innovative approaches to improving results in the area.

Three years ago the Innovative Schools Group ran a pilot in which Year 6 students were provided with ultra mobile PCs which would travel between home and school with each child. The school felt that the

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pilot had been successful and therefore rolled out the scheme out so that every child in year four, five and six now has their own individual ultra mobile personal computer (UMPC).

Alderman Bolton’s ICT vision statement suggests that “as ICT underpins today’s modern lifestyle it is essential that all pupils gain the confidence and ability they need in this area to prepare them for the challenge of a rapidly developing and changing technological world.” Teachers report that the school therefore aims to ensure that digital learning is integral to school life and is embedded fully across the curriculum.

The UMPCs are used for a variety of purposes both in the school and at home. Children have used them to complete internet research as well as using Google sketchup, making films with Movie Maker 2, making podcasts with handheld microphones that plug into the UMPCs and writing stories with ‘2create a superstory’, which is a piece of software that allows children to create multi-media stories using animation and their own text and drawings which can then be shared online. Children are often given support to choose when they would like to use their UMPCs for a particular piece of work and when it may be better to use a different non-technological tool.

The idea behind the scheme is that giving children the opportunity to learn digitally will support their development of subject knowledge as well as increasing their ability to participate in the digital world. The Head Teacher has suggested that the way in which the UMPCs move between home and school has been integral to the success of the project. Students report using the UMPCs at home to follow their own interests and teachers suggest that children are “bringing stuff in to show you what they’ve done at home” and that a closer relationship is therefore beginning to develop between children’s out of school digital literacy practices and their in-school learning.

The school feels that this programme has made a significant difference to students’ achievement but they are keen to emphasise that it is not just having access to technology or developing functional

skills that is important. Instead, they aim to support students to develop their use of technology for a variety of creative and critical learning purposes.

Kibworth Primary School, Leicestershire

Kibworth Primary School is a two-form entry school in Leicestershire which caters to approximately 400 students between the ages of 4 and 11. Year 5 teacher and e-learning leader, James Cheesman, has a particular interest in children’s visual literacy. He therefore believes that developing digital literacy involves more than simply using technology in the classroom. He explains, “for me, developing digital literacy would include things like teaching children how to read images or read films. That’s not just using technology as a way to present or to engage, it’s going way beyond that.” He emphasises that it is important to recognise that a text is “anything that communicates meaning... and that this extends to the writing involved in science, and history and geography...” He understands digital literacy to include the ability to understand and communicate meaning with visual images, with other kinds of texts and with digital technologies across the curriculum. There are many ways in which James and his Year 5 colleague Sheila Critchley set out to support their students’ visual and digital literacy. One way is by giving students a choice over how they present the outcome of their learning. Year 5 students also make a film with a professional film-maker, research and create photo story documentaries for subjects such as science, regularly make video recordings of their work (for example, of poetry they have written), and contribute to forums on the school’s VLE (for example on a project on the Greeks).

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Cramlington Learning Village, Northumberland

Cramlington Learning Village is an 11-18 school with specialist status for science and vocational education in Northumberland in the north east of England. It is made up of a Junior Learning Village (a new build which houses Year 7 and 8), a Senior Learning Village (Year 9 to 11) and an Advanced Learning Village (sixth form).

Cramlington’s approach to digital literacy is centred on the concept of a learner led classroom and an enquiry-based curriculum. The school’s curriculum emphasises the ‘5 Rs’, believing that successful learners are reflective, responsible, resourceful, reasoning and resilient. This means that the school is committed to enabling students to use technology and media to research and resource, to create, to experiment and explore, to transform and translate, to communicate and collaborate and to review and reflect. These are all elements of digital literacy.

The majority of computers at the school are housed on round tables to allow better communication and collaboration and all Year 7 students are required to study the ‘Learning to Learn’ programme which aims to teach children the skills and attributes they need to become better independent learners. A Trans-Disciplinary Unit in information fluency is also taught to all Year 8s and the school believes that these courses provide a good basis which students can then use and develop throughout their time at school, as well as when they leave.

Subject lessons at all levels of the school are planned according to the six stages of the ‘Cramlington Teaching and Learning Cycle’. The subject of the lesson is connected to what students already know so that they understand why they are learning particular content and how this relates to their pre-existing knowledge and experiences, learning outcomes are discussed and agreed with students, new information is introduced to the class, a learning activity takes place, students

demonstrate what they have learned and finally students review their learning.

Assistant Head, Phil Spoors explains,

“We’ve got our Cramlington Learning Cycle, and we’ve got a number of subjects that use an enquiry approach, subjects like humanities, their whole unit will be one big enquiry, where they teach students how to actually enquire and how to research and how to draw information together... that enquiry approach is all about them finding information from different sources and making sense of it and then doing something with it.”

The Cramlington Learning Cycle provides at a school-wide level, a template which provides guidance for planning lessons in which students are encouraged to take some responsibility for their subject learning, to be active in making sense of information both online and offline and to have the opportunity, if they think it is appropriate, to critically engage with a wide range of technology and media. Examples of student’s work can be found at:

www.cramlingtonlv.co.uk/Students/Learning.php

Holy Trinity Rosehill (VA) C.E. Primary School, Stockton

Holy Trinity Rosehill is a two form entry Church of England primary school catering to approximately 480 children in the North East of England. Martin Waller, Year 2 teacher and Creative Learning Coordinator, has a particular interest in the role of multiliteracies in the curriculum. He explains, “schools have traditionally focussed on print based literacy when really that’s just one tiny part of literacy.” In contrast, the idea of multiliteracies also takes into account the new literacy practices involved in engaging with the multi-modal texts of

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popular culture such as films and music and “recognises that new technologies are reconceptualising what we mean by ‘being literate’ in our society.”⁴

Martin has initiated several multiliteracy-related programmes both inside and outside of his classroom. He directs the Multiliteracies Learning Initiative (www.multiliteracies.co.uk) which is a not-for-profit organisation set up to promote a greater understanding of multiliteracies learning. The initiative provides an opportunity for teachers, academics, and other professionals to work together to develop and share innovative practices that are supported by developing research evidence in the area of new literacies.

He was also the first primary school teacher in the UK to integrate the use of Twitter into the classroom. One of the Year 2 children in his class explains, “when you’re learning about something Mr Waller chooses two people to go on the laptop... and you write things that you’ve been learning about and you press send and it goes at the bottom and everyone in the world that goes on Twitter can see it.” Martin explains that Twitter is used by the children to reflect on their learning, to practice their functional and spelling skills and to think about effective digital communication in an authentic context. He has instigated careful controls to make sure that children aren’t exposed to potentially unsuitable content.

Elaine Keely is a Teaching Assistant with 17 years experience working with Martin and the Year 2 class at Holy Trinity Rosehill. She speaks of the impact she feels the use of Twitter has had,

“With Twitter it’s got a lot of children gaining more confidence in writing. They will actually bother going to write whereas if you give them a book and say write a sentence it takes them ages, where with Twitter it seems to be they want to do it, they’re more enthusiastic. I know they make a lot of spelling mistakes but they’re trying their best. It just seems to inspire them to have a go.”

Children in the Year 2 class are also aware that they need to think carefully about what they write on Twitter because it will be seen by so many people.

There are many other ways in which Martin integrates the development of multiliteracies into everyday learning across the curriculum. He makes extensive use of international texts such as *My Neighbour Totoro* and *Kiki’s Delivery Service*, looking at both picture book and animated film versions and asking students to re-tell the stories for different audiences using alternative formats such as animation. He recently set up a Skype conference between the school and the American birthplace of Joel Chandler Harris, who, in the late 1800s, made written records of the Braer Rabbit stories from the African-American tradition. This allowed children to experience a traditional African-American story-teller working in the oral tradition, an experience which would have been unavailable to them without the use of digital technologies. In all of these ways, Martin aims to support students to develop their understanding of differing literacy practices ranging from those that are oral and print-based to the new literacies involved in communicating with digital technologies.

Even a brief perusal of these examples reveals a number of similarities to the approaches taken by these different schools to develop digital literacy. These similarities include a strong emphasis on:

- Student choice, involvement and collaboration (eg giving students a choice of what kind of format and tool is most appropriate to their task)
- Developing independent learning (eg encouraging students to take responsibility for setting their learning objectives, to partake in enquiry-based learning or to pursue their learning independently at home)

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- _ Using technology and media to allow students enter into authentic communication with people outside of the school (eg linking up via Skype with experts in other countries)
- _ Making links between the idea of digital literacy and active citizenship (eg focussing on student agency and voice and asking students to actively engage with texts and current events (ie through creating party political broadcasts)
- _ Using digital literacy practices across the curriculum to support the development of subject knowledge (eg encouraging students to critically engage with subject-specific knowledge gained from interaction with a wide variety of texts in multiple forms and formats both online and off-line).

The remainder of this document reports on some of these issues in more detail through a discussion of digital literacy and the **curriculum**, digital literacy and **pedagogy**, and the **impact** of digital literacy interventions.

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All of the schools that took part in the research were aiming to integrate creative and critical uses of technology and media across the curriculum.

“It’s about history, geography, it’s about every subject area.”

Primary school teacher

“The main thing is it’s in everything we do. It’s not a discrete thing.”

Secondary school teacher

Schools that were most successful at this integration were regularly asking students to use and develop digital literacy practices in order to support the expansion of subject knowledge. This involved, for example, students engaging in online research, critically evaluating the information they accessed and re-purposing it to communicate what they had learnt about a particular subject. Students in Kibworth Primary School, then, were using what they knew about communicating with images, both moving and still, to help them access the history and geography curriculum. Students at Bradfield School were learning about media and film as a way to develop the ability to make a convincing argument using their knowledge of Citizenship. This sort of approach is in marked contrast to technology simply being used in subject teaching as an ‘add-on’, either, for example, to engage students with an idea at the start of a lesson or at the end of a piece of work to allow students to present what they have learned. In contrast, throughout the learning process, this form of integration retains an equal focus on the content that students are learning along with the practices and skills of digital literacy that allow them to access and deepen that knowledge. It is commonly asserted that technology and media-use should be integrated across the curriculum and there is much scholarly work focussing on the issues that surround the use of ICT in school subjects.⁵

There remains, however, a need for further research that explores the idea and practice of digital literacy specifically, particularly in relation to how it supports and/or challenges the curriculum in UK schools.⁶

It is interesting, then, that the evidence gained from this research shows that there was some debate amongst participants about the relationship between digital literacy and the curriculum. For some, digital literacy was akin to being able to read and write and was therefore necessary in order to access the rest of the curriculum.

“It’s like English... You learn English as a means to access lots of other things, you know for most people you learn it so you can access the history curriculum, you learn it so you can access everything else, so it’s a means to access other things is what I’m trying to say.”
Secondary School Teacher

“I see literacy is general but specifically multi-literacies as the overall arching thing for everything we do in school, for every curriculum area.” Primary School Teacher

These teachers recognised that the practices of digital literacy could support the development of knowledge in all subjects of the curriculum and have an idea of digital literacy (or multi-modal literacies) which, despite initial appearances, went far beyond the notion of developing functional skills so that students can present their work. Very much like the idea that writing includes more than just the skill to make shapes on paper, these teachers are pointing to a broad set of understandings that students need to develop in order to ‘write’ well in multi-modal digital formats.

“We’ve gone beyond the printed text, sort of seeing that text means anything that communicates meaning... and that extends to the writing involved in science, and history and geography and those sorts of areas”

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Indeed, as these teachers are suggesting, the ability to write well across different formats and modes and in all of these different subject areas involves critically engaging with subject matter and thinking carefully and critically about the implications of the words, images and formats and types of language that are being used. Students at The Hills Lower School, for example, were being encouraged to think very carefully about the meaning of words and how they could best be used verbally to communicate how to make a marble painting. This sort of critical engagement means being aware of and thinking about the deeper meanings offered by both the texts you read and the texts you produce and it is therefore integral to understanding and communicating in all subject disciplines.

There was also a feeling amongst some teachers, however, that whilst the idea of digital literacy should function to support the other subjects of the curriculum in this way, in many cases it ended up challenging these subjects. Often these teachers felt that the curriculum was currently not able to foster the sorts of critical engagement with the meaning of texts referred to above. In addition, many of these teachers also linked the idea of digital literacy to ideas of active agency and citizenship which they again saw as largely missing in many school-based contexts. As the ‘digital citizenship’ quotations below suggest there was a tangible connection in these teachers’ minds between digital literacy practices, becoming a ‘meaning-maker’ who is able to understand and communicate knowledge through the use of digital technology and media and the ability to participate in digital societies.⁷ In these cases teachers felt that students’ digital literacy practices could become a useful addition to the curriculum, making up for its perceived failings in other areas. For teachers, then, the relationship between the curriculum and digital literacy depended on “how you view

⁷ This is not, however, to imply that there is necessarily a straight-forward and unitary process involved in moving from the ability to take part in various digital literacy practices and being empowered to take a full and active part in all of the political, social, economic and cultural facets of contemporary society. Indeed, the issue of ‘participation’ is eminently complex and cannot be understood without reference to the possible effects of a wide range of interlinked structural inequalities which are amongst the many factors which affect people’s ability to participate.

the curriculum” as well as how you view your subject. Those teachers who felt that the National Curriculum was narrow and restrictive tended to believe that a commitment to developing digital literacy practices challenges the curriculum and “shows it up for being completely out of date.” This suggests that whilst digital literacy practices can be used to cover the curriculum by encouraging the development of subject knowledge, they can also serve to extend and challenge that curriculum by encouraging students to engage in processes of active meaning-making that can otherwise be under-represented in students’ educational experiences.

Digital citizenship

In the quotations below, teachers reflect on the relationship between digital literacy and the idea of ‘active’ citizenship. Further information about teachers’ views on this relationship can be found in the section on digital literacy and the curriculum.

“Political literacy is for me, creating a sense of agency, amongst kids, that they can engage with, with politics and the world around them, and in a sense it belongs to them. I guess if you’re going to apply that and adapt it to ICT what would that be? That would be creating an agency they can engage with computers and the modern age, which effectively is what we’re trying to say. Nowadays you’ve got big organisations like Google and big multinational companies and the kids aren’t necessarily as savvy about that and maybe not necessarily aware of how they can influence and change things... I guess you could suggest that was a matching of citizenship, political literacy with digital literacy, kids realising they can engage with these big multinational companies and work out who some of these actors are on the internet.” Secondary Teacher

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“I talk to them about being active consumers, I talk to them a lot about, you know consuming media texts because when they think of texts they think of writing on a page.... they don’t really see a film as a text so I regularly kind of reiterate that, about, you know, ‘how are you interpreting this text, how are you getting meaning from it so it’s more about being an active consumer of media.” Secondary Teacher

“I see the usefulness of digital literacy almost in an active citizenship way in that kids... who aren’t necessarily the most fluent writers can use other things to communicate or argue or present things.” Primary Teacher

“I think its empowering them as well, if you teach them how it can be used and then let them explore the technology and the software, which they’re very confident to do it, and give them the time and the room and give them some feedback and then let them build something unique and special and they will use that.” Primary Teacher

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The notion of students becoming active meaning-makers is common to many academic understandings of digital literacy⁸ but it has significant implications for pedagogy. In recent years, it has become more commonplace to hear claims that the use of technology and media in the classroom can support and be supported by alternative forms of pedagogy whereby the teacher becomes a facilitator encouraging students to participate in independent and collaborative learning.⁹ In some cases, this becomes little more than a cliché with little attention paid to what it means in practice and the challenges and opportunities that this sort of ‘participation’ presents for learning.¹⁰ Whilst it is important therefore to question simplistic assertions about the value of this sort of learning, it is difficult to see how a commitment to developing students’ digital literacy practices and their ability to use those practices to access subject knowledge can take place without a strong emphasis on independent learning.

Most understandings of digital literacy see it as the ability to independently and knowingly ascertain what sorts of practices will allow one to understand, create and share meaning through an appropriate engagement with technology and media. There are many aspects of this understanding of digital literacy that explain why a change in teacher role and a focus on independent learning is so important to its development. Primarily, the ability to adapt one’s behaviour, understanding and communication to the needs of particular contexts and formats requires an ability to make autonomous and critical

decisions about meaning and appropriateness in those contexts. In addition, this understanding of digital literacy involves a strong emphasis on different forms of what can be called ‘participation’ including the idea that digital literacy enables young people to enter into collaborative digital practices that allow them to create and share their own understandings and knowledge as well as to independently engage with digital cultures and civil society. Indeed, rather than being experienced as a cliché, both teachers and students involved in this project reported that activities which aimed to develop digital literacy practices alongside subject knowledge required a marked change in teacher role and therefore a different pedagogical process.

One secondary school, for example, made a particularly strong link between digital literacy and enquiry-based learning.

“the enquiry approach is all about them finding information from different sources and making sense of it and then doing something with it... We train them in setting learning objectives, so that it’s not always us setting them. There might be five groups of students in the room with completely different objective which they’ve set themselves, but we do that using online blogs so that we can give feedback on the objectives they’ve set and so can other students so they’re constantly developing those skills... You’ve got a totally different role as a teacher, you’ve got to be very proactive, possibly even more so that if you’re teaching the class because you’ve got to make sure that the kids are doing what they should be doing, that they’re focussed, that they’ve got a real sort of goal to aim for, and that it’s appropriate, and that takes a lot of coaching to get the kids to that stage. You’ve also got to get them to feed back to you, so you’ve got to know where they’re at, and to do that, another thing what we do actually is what’s called individual interviews, which take place throughout the lessons, because you’re not delivering the content, students will almost find it out for themselves, it releases a bit more of your time, and you can call the students out either individually or in groups, and you just have a conversation, very open, honest conversation - What are you working on? Why? Is your task appropriate? And you can ask all of these questions and start to get them to think about whether they’re doing

8 See, for example, Burn, A. & Durran J. (2007) *Media literacy in schools. Practice, production and progression*. London: Sage; Merchant, G. and Davies, J. (2009) *Web 2.0 for schools: learning and social participation*: Peter Lang Publishing; Carrington, V. & Robinson, M. (2009) *Digital Literacies: social learning and classroom practices*, Sage; Lankshear, C. and Knobel, M. (2008) *Digital Literacies: concepts, policies, practices*. New York: Peter Lang Publishing.

9 For thoughtful accounts of the relationship between pedagogy and technology and media-use, see New London Group (2000) *A Pedagogy of Multiliteracies: designing social futures* in Cope, B. & Kalantzis, M. (eds) *Multiliteracies: Literacy Learning and the design of social futures*. Routledge; Beetham, H. & Sharpe, R. (eds) (2007) *Rethinking pedagogy for a digital age: designing and delivering e-learning*, Routledge.

10 Merchant, G. (2009) “Web 2.0, new literacies and the idea of learning through participation” *English Teaching: Practice and Critique*, 8:3.

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the right things rather than you just saying, you need to be doing that next, and we see the kids respond to that. They really like working in that way.”

This quotation gives a good insight into some of the processes that teachers go through in order to foster independent and collaborative learning. In common with many of the teachers we spoke to, this teacher felt that the task of promoting student independence required the teacher’s role to become **more** rather than less proactive in the classroom. This involved careful consideration about the right amount of input to give students and skilled questioning to ensure that students stayed on track, got the help they needed and reflected on what they were learning and what they needed to do in order to learn more.

It was notable that students too in this school remarked that teachers were ‘different’.

Interviewer: Do you think there’s anything that the teacher does differently?

Student: It’s hard to explain but they do things a lot differently to my old school... I used to be in [another secondary school] and the way the teachers are here is a lot different. They’re much more patient and calmer and they’re actually... in a weird way they act more...

Student 2: Civilised?

Student 1: Yeah, they don’t act like they’re there to teach you and that’s it. The teachers are there for you... it’s not just “you learn this. I’ll teach you.” They do more than that.

Interviewer: That’s really interesting. Do you think it would be fair to say that they’re helping you to become more independent?

Student 1: Yeah, definitely.

This exchange is interesting because it illustrates that at this school there was a palpable sense shared by both students and teachers that there was a different pedagogical relationship taking place between the adults and children at the school.

Many students that took part in the research shared a sense that, as one student put it, teachers need to “take a step back” and give students more choice about the sorts of technology and media they use in lessons. They also showed remarkable sensitivity to the complexity of this. This particular student, for example, later corrected himself and said “when I said they should take a step back, I didn’t mean anything goes” and spoke of the need for structure in lessons. This led to a discussion in which students agreed that teachers sometimes rely on delivering different information at specific times to structure a lesson and that when students have more choice over the content or format of their learning this requires more rather than less structure during the lesson but that this structure is of a different and less straight-forward nature.

Students here are picking up on an issue that many teachers also raised of the challenges involved for teachers in encouraging independent learning:

“I suppose in effect you’re still teaching the same as before but then they take it further, they push it further and then possibly you do take a backseat because they’re leading, so they’re leading their own learning... You’re letting them decide and take responsibility for more, and doing more of a supportive role I suppose. Obviously you’ve still got to do the teaching part!”

The idea that teachers still have a responsibility to “do the teaching part” was common to many teachers and many felt that it was a challenge to find less didactic ways of teaching that didn’t involve spoon-feeding students but that also did not forego their responsibilities as teachers. One teacher suggested that in these situations teachers need to encourage students to develop “a second tier of understanding really” and suggested “it’s hard, taking a step back and letting them do some

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thinking, and having the answers because you can’t just let kids wander around having misconceptions about things because you’ve given them too much freedom, but letting them come to grips with problems before you intervene.” Again, then, for this teacher, the difficulty in the changed pedagogical process lay in finding the balance and knowing when and how to step in to support students to think more deeply and to make connections between different ideas and information.

Other teachers suggested that students too experience challenges associated with this way of learning and that this in turn can create additional challenges for teachers. One teacher suggested that “probably the biggest challenge is to get them to be a little bit more daring and a little more resilient and taking risks because they’re, you know... they’re used to being sat at a desk in a classroom with a teacher telling them what to do, and in terms of my practice as a teacher it’s really quite challenging.” Teachers involved in the research suggested that particularly in secondary schools, students are often used to didactic teaching methods and this can mean that when teachers try to encourage independent learning, students “just keep putting their hands up and asking what do I do next, what do I do next?” This highlights the potential difficulties that can be experienced when fitting digital literacy interventions into existing school cultures. Some of the schools we spoke to in this research (the secondary school that focussed on enquiry-based learning, for example) had developed whole school approaches to digital literacy whilst others had just a few teachers developing digital literacy interventions in the context of their own classrooms. In the latter case, there were many more challenges involved for both teachers and students who were used to working in a context that, for many reasons, did not include a focus on independent learning.

By far the biggest challenge and difficulty for teachers who set out to develop digital literacy by encouraging independent learning, however, was the pressure of “meeting the standards agenda.” This was often accompanied by worries about time pressures and the need to ensure comprehensive coverage of content for exams.

“Fundamentally, teachers would like to be driven by other things, they’d like to be driven by providing high quality learning experiences but when it comes down to it, they are in the business of getting people through exams.” Secondary school teacher

A change in pedagogical process and an emphasis on independent learning could often be perceived as risky for teachers whose performance reviews depended on moving students up by a certain amount of National Curriculum levels. Many of the teachers that took part in this research, however, felt they had, at least in part, found ways to balance this risk by ensuring that any work with digital technology or media focussed on curriculum content and by offering a variety of independent learning opportunities alongside more didactic teaching methods.

In summary, teachers reported several challenges involved in a changed teacher role and pedagogical process:

- _ finding a balance between action and inaction and knowing when to intervene
- _ student response when students are used to more didactic teaching methods
- _ fitting into the context of school
- _ time pressures created by the need to cover the content for exams
- _ not letting students go away with misconceptions.

Whilst these challenges must be acknowledged, it is also important not to forget that as these teachers point out, a change in pedagogical process has the potential to present many opportunities and rewards for both teachers and students. Teachers felt it was much easier to foster good collaboration and communication between students when teachers took a step back from didactic teaching methods. Primarily,

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though, teachers believed that this focus on independent learning served to develop students’ ability to independently enter into practices of knowledge making and sharing with technology and media.

For many teachers their students’ journey towards becoming independent learners was one of the major benefits of designing approaches to digital literacy across the curriculum. It is difficult, however, to gain an exact and independent measurement of the impact of digital literacy interventions.¹¹ To do so would require longitudinal studies that would follow the development of students’ in and out of school digital literacy practices over a period of several years and across a wide range of contexts and situations. The best resource available for thinking about the impact of such interventions is teacher knowledge and teacher and student perception. This is a rich and valuable source of insight into the opportunities and challenges involved in developing digital literacy interventions and the impact those interventions might have. Yet not only are teacher and student perceptions not firm measurements, they are also influenced by the values, motivations and experiences of the individuals involved. In many ways this close personal involvement is what makes those perceptions so valuable but it may also mean that we have little information about areas of impact that are less obvious to the individual teachers directly involved in developing approaches to digital literacy.

Part of any attempt to gauge the impact of digital literacy interventions needs to involve a consideration of how students progress with both their digital literacy and their subject knowledge as well as how it is possible to assess this progression. Indeed, assessment is a hugely important area with far-reaching implications. Researchers remind us that “assessment practices do far more than provide information, they also shape people’s understanding about what it is important to learn, what

learning is, and who learners are.”¹² Many educational commentators agree that at all levels of education, traditional summative assessment techniques that tend to look back at what students have learnt need to be accompanied with forward-looking formative assessment practices that look at how students learn in different contexts and that provide feedback on how they might best be able to develop this in the future.¹³ Yet, although both formative and summative assessment practices have received increasing attention in recent years, there still exists relatively little scholarly work on the issues that surround the assessment of digital literacy.

It was notable, then, that the teachers involved in this research did not feel that the idea of digital literacy presented particular challenges in terms of assessment. These teachers felt that their assessment practices, and in particular their formative assessment practices, did not significantly change whether a piece of work did or did not engage with technology and media and with different modes and formats of communication. This may be related to the way in which these teachers were moving away from skills-based approaches to digital literacy and towards an understanding that digital literacy practices can be integrated with subject knowledge and involve critical engagement, creativity, and the ability to communicate knowledge. Teachers felt practiced at developing formative methods of assessing subject knowledge, critical engagement and creativity with the only additional challenges presented by digital literacy interventions being those caused by students having different learning objectives or producing different outputs in different formats.

The teachers that took part in this research believed that using technology and media in everyday teaching had the potential to support students to perform better in both formative and summative assessments and this could have a particularly large impact on lower ability students. Teachers felt, however, that the impact of digital literacy

¹¹ The question of how ‘impact’ can be designed and measured is currently of considerable interest to academics. In the world of ICT and education, a team led by Charles Crook have recently published a study of the impact of technology on classroom practice. This study takes a broad approach to the notion of impact focussing on the contexts and practices of ICT-supported learning. Crook, C. et al (2010) The impact of technology: value-added classroom practice. Becta

¹² Moss, P. et al (2010) Assessment, Equity and Opportunity to Learn, Cambridge University Press: 111.

¹³ Black, P. & William, D. (1998) Inside the black box: Raising standards through classroom assessment. Phi Delta Kappan, 80, 139-148.

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interventions was related to the extent to which these interventions were accompanied with informal, everyday assessment practices that provided students with frequent opportunities to discuss their learning and gain feedback from both teachers and peers. Indeed, as these teachers suggest, such formative assessment practices also move away from seeing literacy (of any kind) as a fixed, neutral and ‘testable’ attribute of an individual towards an understanding that the way in which we practice and recognise digital literacy will be affected by the cultural and social context in which a person or a group of people are operating. As Johnston & Costello write, “although we often think of literacy as a set of all-purpose skills and strategies to be learned, it is more complex, more local, more personal, more social than that.”¹⁴ Accordingly, assessment practices need to account for this complexity by supporting students to develop both digital literacy and subject knowledge across a variety of contexts.

A focus on assessment therefore also needs to be tempered by a conscious commitment to disentangling the notion of ‘impact’ from a narrow focus on results or on ‘driving up’ standards in schools. Rather than focussing on students’ performances in one-off tasks, for example, it is important to consider what impact digital literacy interventions can have on the situated and context-dependent digital practices of students’ every day lives both at school and out of school. Whilst we currently have little reliable information about this, it may be unlikely that isolated ‘digital literacy activities’ will have a significant and sustained impact on students’ lives. The overall pedagogical approach implied by the idea of developing digital literacy may, however, be more important. Many teachers suggested that encouraging students’ independent learning and their ability to critically engage with the world around them had the potential to make a significant change to how students perceive themselves as learners.

Assessment

“I’d say assessing the ICT skills is the bit that’s difficult because they’re so wide ranging aren’t they?... I think it helps the assessment of the other subjects really.” Primary school teacher

“There are a lot more things we develop through digital literacies work in addition to the normal things, so yes you can assess the work according to the national curriculum, but there are a lot of skills which aren’t even in the national curriculum which the children develop so on paper it looks like they’re achieving the same but they’re not, they’re achieving a lot more.” Primary school teacher

“We find creating a project log essential so that they can reflect on every lesson on what they’ve actually done and what they need to focus on the lesson that’s coming up next, and again that’s done using online tools. We use Google documents for that, so that there’s just an online form that they fill in every lesson.” Secondary school teacher

“We also need to teach them the enquiry cycle, so they’ve actually got an enquiry cycle, and explicit stages of carrying out an enquiry, which is taught to students at the very start of a unit and they’ll keep revisiting that so as a teacher you’ll say to the kids, you know, everyone come back, let’s have a look at the enquiry cycle, where are you to, why, what should you be doing next, what’s the elements of good research, that sort of thing, so you can base your conversations around needs of the students at that time and just keep referring back to these tools I guess.” Secondary school teacher

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Thoughts from teachers on the impact of digital literacy interventions

“I think motivation definitely, and then developing skills that they need in the real world. We use Twitter, yes to improve writing, but also to teach them safe practices on online networks... I also think you just need to look at their popular culture... People seem to ignore the popular culture of children when they’re planning lessons and I just think it’s a good way of getting them engaged... They don’t realise, when they’re making omelettes, they’re learning instructions, they just don’t realise it, but they did it, and they don’t realise that a lot of their activities they perceive as sort of having fun or playing are actually grounded in strong links to the curriculum. They don’t realise that. They don’t realise that Twitter’s helping them to learn to spell.”
Primary School Teacher

“They laugh at me when I say can I have a smile but I do genuinely like children to be happy and to see that learning can be fun and meaningful and not necessarily focussed completely on text books and worksheets all the time, and I enjoy it.” Primary School Teacher

“It just brings it alive for them I think... it uses all their senses and I think it’s a very positive thing.” Primary School Teaching Assistant

“We think it’s made a real difference to our children... they’re bringing stuff in to show you what they’ve done, continuing their work at home. We were all a bit dubious at first, but now...” Primary School Teacher

“Well we’ve surveyed the children and we’ve surveyed the parents and we’ve shared the work in an open exhibit where we’ve invited governors and community members and parents and staff and the children have put on a display of their work, so what we’ve seen is that they’ve gained in confidence in their speaking abilities, we’ve seen their creativity, we’ve seen them using their teamwork and we’ve seen

them become very digitally literate with technology, so they’re able to converse with a parent, sit down and say how they made that video, and they’re going home now and picking up bits and pieces of kit and they’re bringing it back in and saying ‘I did this over the weekend’.”
Primary School Teacher

“What we’ve done here... has had a significant effect on students’ ambitions, you know on types of choices, on courses they’re taking...”
Secondary School Teacher

“We’re talking to the students, encouraging them to do stuff for themselves and our conversations revolve around project management and good learning, and we also ask for feedback at the very end of that course, and the feedback is overwhelmingly positive from the students. They love that way of working and they love the independence and some of the students who perhaps don’t normally do well respond to being given that bit of extra responsibility”
Secondary School Teacher

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This report uncovers some of the school-based practices taking place across the country that aim to develop students’ digital literacy in a way that serves to support the expansion of subject knowledge. It provides an overview of several different school approaches to the use and development of digital literacy practices and reports on discussions with 12 teachers, one teaching assistant, one head teacher, three other educational professionals and six groups of students at both the primary and secondary level. It suggests that despite each approach to digital literacy being unique and depending on the context of a particular school and the teaching practices of particular teachers, there are some striking similarities in many of these approaches to digital literacy. These similarities include a focus on learning processes that allow a greater degree of student choice, involvement and collaboration, a changed pedagogical process arising from a commitment to developing independent learning and an association of the practices of digital literacy not just with the development of subject knowledge in different disciplines but also with the idea of active citizenship.

The term digital literacy is largely understood in academic circles to refer to a wide range of critical, creative and cultural practices that allow one to understand, make and share meaning and knowledge in different modes and formats through various forms of engagement with technology and media. The report uncovers, however, a wide range of understandings of the term digital literacy in educational contexts that has the potential to cause confusion and which in part explains why, currently, the term is hardly used even in those schools that are interested in fostering a critical and creative engagement with technology and media in everyday teaching and learning. It suggests that the term remains useful in school contexts, however, because it can open up debate and discussion to a consideration of the wide-ranging issues implied by the role of technology and media in society and allow a reflection on how teachers and students are moving beyond simply using technology for presentational purposes or for straight-forward engagement and motivation. Instead, the idea and practice of digital literacy recognises that the process of developing subject knowledge is becoming increasingly dependent on the ability to enter into practices of understanding, sharing and communicating knowledge and meaning through the use of technology and media.

Indeed the *raison d’être* of many of these school approaches to digital literacy was the expansion of students’ subject knowledge and teachers believed that digital literacy, like conventional reading and writing, could support learning in all areas of the curriculum. They also pointed out, however, that digital literacy practices offered some challenges to the current curriculum because these practices focus on independent learning and view students as active makers of meaning in a way that is currently under-represented in many school curricula and may be at odds with traditional didactic teaching methods. The interviews provided a useful insight into teachers’ views about the integration of digital literacy across the curriculum but more work could usefully be done to understand exactly what the relationship is and could be between the practice of digital literacy and the development of subject knowledge.

There are many important issues that surround the use of technology and media in schools, including challenges associated with school access to reliable technology and funding, e-safety, and training and support for educational practitioners, particularly those who have less well-developed technical ability.¹⁵ One of the major challenges that was raised in this research, however, was the issue of developing alternative pedagogical approaches that can foster independent learning and therefore support students to become active meaning-makers with technology and media. Many of the teachers and students involved in this research agreed that activities that were designed to foster and use digital literacy practices to develop subject knowledge involved a changed pedagogical process. The challenges involved in this change included teachers knowing how and when to step in to support students’ independent learning processes, students resisting being asked to take responsibility for their own learning when they were used to more didactic teaching methods and the important challenge of fitting an emphasis on independent and collaborative learning into school contexts dominated by the standards agenda. However, both students and teachers felt that despite these challenges, a changed

¹⁵ Becta have produced digital literacy materials and a planning guide designed to support teachers to integrate digital literacy into their everyday practice. See http://schools.becta.org.uk/index.php?section=tl&catcode=ss_tl_dl_02 Futurelab have also produced a handbook for teaching practitioners on digital literacy across the curriculum Hague, C & Payton, S, (2010) Digital Literacy Across the Curriculum: A Futurelab Handbook

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pedagogical process was extremely rewarding as well as being a necessary part of the attempt to develop and use digital literacy practices in school-based contexts.

Finally, the report discussed the issues that surround the attempt to ascertain the impact of digital literacy interventions in English schools. It suggests that everyday formative assessment practices (that involve students in their own and their peers’ assessments and give them extensive feedback on how they can improve their learning processes) are fundamental to the perceived success of many digital literacy interventions. This success is also perceived to be related to a sense in which digital literacy practices can “level the playing field” so that lower-ability students or reluctant readers and writers have a greater opportunity to develop their subject knowledge. Ultimately, though, the research suggests that the notion of impact needs to be disentangled from a narrow focus on assessment or on the idea of improving results. Instead it needs to focus on the impact that digital literacy interventions can have on students’ burgeoning digital practices both in school and out of school. Although digital literacy is a complex issue in both theory and practice, both teachers and students shared a sense that digital literacy interventions had the potential to have a significant impact by contributing significantly to a much wider process of developing students’ view of themselves as independent learners able to participate politically, socially and culturally in an increasingly digital society.

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We have a long track record of researching and demonstrating innovative uses of technology and aim to support systemic change in education – and we are uniquely placed to bring together those with an interest in improving education from the policy, industry, research and practice communities to do this. Futurelab cannot do this work on its own.

We rely on funding and partners from across the education community – policy, practice, local government, research and industry - to realise the full potential of our ideas, and so continue to create systemic change in education to benefit all learners.

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Key to Themes

Futurelab understands that you may have specific areas of interest and so, in order to help you to determine the relevance of each project or publication to you, we have developed a series of themes (illustrated by icons). These themes are not intended to cover every aspect of innovation and education and, as such, you should not base your decision on whether or not to read this publication on the themes alone. The themes that relate to this publication appear on the front cover, but a key to all of the current themes that we are using can be found below:



Digital Inclusion – How the design and use of digital technologies can promote educational equality



Teachers and Innovations – Innovative practices and resources that enhance learning and teaching



Learning Spaces – Creating transformed physical and virtual environments



Mobile Learning – Learning on the move, with or without handheld technology



Learner Voice – Listening and acting upon the voices of learners



Games and Learning – Using games for learning, with or without gaming technology



Informal Learning – Learning that occurs when, how and where the learner chooses, supported by digital technologies



Learning in Families – Children, parents and the extended family learning with and from one another