



Taking Teachers Through the Portal

Creating tools to help teachers use Digital Writing within the curriculum

A report of the Writers for the Future in the Classroom project carried out for NESTA by the trAce Online Writing Centre
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1 Executive Summary

2 What is Digital Writing?

When we started this project we at the trAce Online Writing Centre knew what we were studying but we didn't know what it was called. This is an issue that we have been struggling with throughout the past ten years. At first we called it **online writing**, but it clearly included many types of writing that were not online but distributed on CD or DVD, for example. There is still no accepted nomenclature for this type of writing among its practitioners, let alone amongst the general public. It's not even clear whether it is a literary genre or a movement encompassing many art forms including writing. So we tended to call it **new media writing**, but others, in the literary, art and education fields, have called it many things, including:

Computer-mediated writing: Hypertext: active text: web-specific writing: new media work: new media writing: net literature: Net Art: poetry-multimedia installation: web integrated writing: moving poetry: storytelling: multimedia: hypertext poem: net-art-writing: internet based narrative: internet story: hyperfiction: Interactive Fiction: Hypertext Fiction: hypermedia: digital literature: Net-narrative: net-essays: cyberpoetry: digital narrative: Net-specific hypermedia poetry: hypermedia literature: interactive literature: randomly created web narrative: interactive poetry: hyper-essay: Web Poetry: Flash Poetry: multimodal texts: Web projects: electronic literature: web-animated visual poetry: web-based poem: web content: online content: Digital Literacy: Visual Literacy: Digital Storytelling: E-literacy: ICT and literacy: Animated stories



The phrase "new media" has obvious problems - at what point is the medium no longer "new"? - and tends to include some installation and film-related work when used in the context of art. For the rest of this report I will use the phrase **Digital Writing**, because I feel the digital element of the writing is what marks it out as different.

Broadly, Digital Writing is writing that can only be read in digital form using a computer.

This is like the difference between a play and a film: many people just can't see the difference in the media other than that one is live and one is not. However, children today are growing up surrounded by multiple media - including TV, video and DVD, computer games, MP3s, books - they multitask, use technology for communication and subvert it for creative purposes. They are absorbing the processes and thought patterns that are appropriate to these media, and reworking the conventions appropriately. I find that they are much quicker than their elders to think in a nonlinear or multilinear way when they create stories (see Appendix 4).

The writing is digital because computer technology is essential to view it (e.g., a multi-stranded hypertext story like Adventure Island can be visualised offline but only properly experienced online), or because the work depends on the network - (e.g., it is produced collaboratively by a group of writers all over the world who could not otherwise be connected: as is the case with *In Search of Oldton*). trAce's *Opening the Space* guide states:

"All new media writings do have at least one thing in common - they must be viewed through the medium of an electronic display, usually a screen but sometimes just audio, via a PC or Mac, a laptop, a PDA, a mobile phone, data projector, or perhaps even a giant outdoor image. Their uniting characteristic is that the computer is an essential component of the writing and without it the work would not exist."

The key technologies of Digital Writing include:

- Movement (e.g., animated poetry in Flash).
- Interactivity (e.g., an instant story where the user enters some words and a story is generated).
- Hypertext (e.g., a branching story).
- Networked texts (e.g., a story where readers add to the text).
- Visual (where the visual is not just an illustration of the text but integral to the work).

Digital Writing may include (where used with creative intent):

- MOOs virtual spaces in which users create themselves and objects, and interact in real time:
- Powerpoint:
- Blogs (weblogs: where hyperlinks to other sites and/or comments from readers are integral, rather than the type of blog which is merely a journal):
- Community website technologies such as flickr.com (photo sharing), del.icio.us (web bookmark sharing) and wikis (A wiki is a piece of server software that allows users to freely create and edit Web page content using any Web browser):
- SMS & other mobile technologies many of the features of writing for mobiles qualify it as Digital Writing (e.g., digital technology, networking):

¹ *Opening the Space: Guide*, The trAce Online Writing Centre, 2003, http://trace.ntu.ac.uk/transition/guide/index.htm (accessed 10th April 2005)

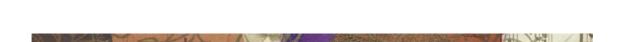
- Web content written specifically for the web utilising hyperlinks and incorporating networked features like comment boards so that the responses of the readers are as important as the original text - something that couldn't happen in the same way to a magazine article:
- Computer games, especially those in which narrative is vital.

Digital Writing does not include:

- Pure communication technologies such as email, ICQ and chat (except where such technologies are used in a creative context, e.g., a drama performance in a chat room):
- Film and video, even digital video:
- Journalism published on the Web:
- Ebooks or any other form of writing where the Web is just the distribution medium and the content could just as easily be read as a book or magazine:
- Writing intended to be printed off the computer:
- Writing produced using digital technologies that does not require computers to view it, e.g., using a word processor or even an online tool to produce a poem that could have been handwritten and which can easily be printed off and read.

eTeachers' Portal screenshot www.eteachersportal.com





3 Introduction

Where does Digital Writing sit in the broader context of children's digital literacy? Digital literacy and eliteracy are terms often used to refer to children's skills in using the computer and other technologies such as digital video cameras. ICT as a tool can revolutionise the way that children learn to write. I have seen it galvanise children who had not been interested in writing before at all. The next step is to move from using ICT for "traditional" writing - poems, stories and nonfiction as seen in print - to using it to produce actual Digital Writing, using the full potential of the technology. The reasons why teachers and children should get involved with Digital Writing - and its benefits to them - are discussed in this report.

3.1 The educational context in the UK

"I see ICT and its potential to transform how we teach, learn and communicate as crucial to our drive to raise standards. ... we must move the thinking about ICT from being an add-on, to being an integral part of the way we teach and learn in schools." Ruth Kelly, Secretary of State for Education, January 2005²

"My vision is one where schools are confidently, successfully and routinely exploiting ICT alongside other transformational measures. By doing so they will be delivering an education that equips learners for life in the Information Age of the 21st century."

Charles Clarke, then Secretary of State for Education, 2003³

The education secretary, Ruth Kelly, announced on 12th January 2005 at the BETT educational technology conference in London, a new drive to help every teacher update his or her computer skills. She promised to investigate further ways to help teachers keep up with computer technology and ways of using information communication technology (ICT) in the classroom.⁴

The 2003 Government document *Fulfilling the Potential: Transforming teaching and learning through ICT in schools* proposed a number of common characteristics which the use of ICT either enables or enhances for learners:

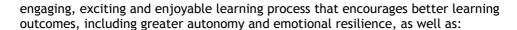
"It should mean improved educational outcomes, with higher standards of attainment and the acquisition of important skills such as digital and visual literacy. It should also help to make learning more differentiated and customised to individual needs, and deliver a more

² Speech to BETT conference, reported at, e.g., http://education.guardian.co.uk/schools/story/0,,1388869,00.html

³ Fulfilling the Potential: Transforming teaching and learning through ICT in schools. (2003) http://www.dfes.gov.uk/ictinschools/uploads/genericdocs/Fulfilling%20the%20Potential.doc

⁴ Kelly zeroes in on teachers' computer skills, Polly Curtis, education correspondent Education Guardian, 12th January 2005,

http://education.guardian.co.uk/schools/story/0,,1388729,00.html



- broadened horizons with more opportunities for creative expression; ...
- increased motivation through learning that stimulates, stretches and takes into account prior and concurrent experiences in and out of school; ...
- the ability to make sensible choices about when, when not, and how to use new technologies ...

Pupils who make frequent use of computers enjoy both greater motivation to learn and higher levels of achievement. $^{\rm "3}$

However, there's still a long way to go before most teachers will be using digital resources familiarly and regularly. A May 2004 Ofsted report on ICT in schools found that despite 90% of teachers being rated competent or better by their ICT skills, provision in schools was still patchy. The report said: "The gap between the best and worst ICT provision is unacceptably wide and increasing. In the most outstanding examples, ICT is starting to have a pervasive impact on the way teachers teach and children learn. But the quality, diversity and extent of pupils' ICT experiences vary widely between schools." ⁵

Curriculum Online is the website "central to the Government's drive to transform teaching and learning in schools by improving access to ICT and multimedia resources for all pupils" ⁶. It aims to bring teaching professionals and multimedia resources together and help schools access appropriate resources.

Funded by the DfES and managed by BECTa, the report *ImpaCT2*: The *Impact of Information* and *Communication Technologies on Pupil Learning and Attainment*⁷ analysed the relationship between pupils' use of ICT and their performance in national tests and GCSEs.

The report found that ICT is fast becoming an established part of students' learning experiences and is increasingly valued by teachers. By making comparisons between 'high' and 'low' users of ICT, the research shows that in the majority of cases, high users outperform low ones.

We are now reaching the point in time at which teachers are familiar with the technology and pupils are gaining the appropriate ICT skills to move on to the next step: creating Digital Writing. Briefly, I would say that Digital Writing develops pupils' ICT skills while encouraging imagination and creativity. Now that schools have the technology and teachers know how to use it, it is time to use it in more innovative ways to meet curriculum objectives.

3.2 The case for Digital Writing in schools

Two further IMPACT2 BECTA studies^{8, 9} showed that most pupils spend more time with ICT at home than in school. A resource therefore such as Kids on the Net that spans the divide

http://www.becta.org.uk/research/research.cfm?section=1&id=563

⁵ ICT in Schools 2004: the Impact of Government Initiatives Five Years On, OFSTED, 2004 http://www.ofsted.gov.uk/publications/index.cfm?fuseaction=pubs.displayfile&id=3652&type=pdf
⁶ Curriculum Online http://www.curriculumonline.gov.uk

⁷ ImpaCT2 - The Impact of Information and Communication Technologies on Pupil Learning and Attainment, BECTA, 2002, http://www.becta.org.uk/research/research.cfm?section=1&id=561

⁸ ImpaCT2: Pupils' and Teachers' Perceptions of ICT in the Home, School and Community, BECTA, 2002
http://www.becta.org.uk/research/research.cfm?section=1&id=562

⁹ ImpaCT2: Learning at Home and School, BESTA, 2002,



between home and school has many advantages. The third report of the UK Children Go Online Project (www.children-go-online.net) found that 17% of 9-19 year olds had sent pictures or stories to a website. ¹⁰

I believe these results show that Digital Writing can offer some of the following advantages:

- Raising achievement: the IMPACT2 study showed that at KS2, a statistically significant positive association between ICT and higher achievement in National Tests for English was found at Key Stage 2.
- Using a computer motivates pupils: because it involves using technologies, devices and applications that they already love to use in the rest of their lives. It particularly motivates some pupils who are not as motivated to read and write by "traditional" means, e.g., low-achieving boys.
- **Developing a modern literacy**: children live in a multimedia world, and while Digital Writing is never going to take the place of other writing, it is logical to the multimedia generation that this part of their literacy.
- **Preparation for the working world:** it prepares children for a working life in which digital literacy is likely to be vital.

Digital Writing is still in its early development. It is not even clear yet whether it is a genre or a movement or something completely different. I believe that the stars of this new art form will come from the generation currently in school, the generation brought up with nonlinear, multilinear, multimedia "texts".

Finally, I know that a lot of the children I have worked with agree with the statement on the Curriculum Online website⁶ that using a computer is valuable "because it's fun..."

Creativity has increasingly been recognised in recent years as vital to the individual, to society and to the economy, and initiatives have been formed within and outside the curriculum to ensure that innovation and creativity is nurtured in young people.

"Unless more people leave formal education with an enhanced capacity to engage in, and make an active contribution to, innovation, then much of what we label creativity and inventiveness and entrepreneurship and enterprise will remain unexploited to the detriment of both individuals and society. David Hargreaves, 2001¹¹

Various initiatives and organisations are engaged in researching and developing the creative process in schools, including Creative Partnerships¹² and Futurelab. ICT is one of the tools that can be used in this process:

"Creativity can be promoted and extended with the use of new technologies where there is understanding of, and opportunities for, the variety of creative processes in which learners can engage." Avril Loveless, 2002¹³

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¹⁰ UK Children Go Online survey, Third project report *Active Participation or Just More Information?* Young people's take up of opportunities to act and interact on the internet (published 22 October 2004) http://personal.lse.ac.uk/bober/UKCGOsurveyexec.pdf

¹¹ Towards education for innovation, David H Hargreaves (Chief Executive, Qualifications and Curriculum Authority), 22 November 2000,

http://www.harrowtc.org.uk/dt/resources/pedagogy/creativity%20innovation%20Hargreaves.pdf ¹² http://www.creative-partnerships.com/

¹³ REPORT 4: Literature review in creativity, new technologies and learning Avril M. Loveless, NESTA Futurelab, 2002



It is clear that digital creative writing can, if the potential is grasped, play a large part in this eduation for creativity.

3.3 Other digital projects including writing

Based on the working definition of Digital Writing used by the Writers for the Future project (see Section 2) our projects Kids on the Net and Writers for the Future are quite rare. There are not many similar projects in which young people have a real stake in the digital aspects of writing (see later for a discussion of how to give them this stake). Ruth Hammond of BECTA told me "You are offering something quite unusual". Even if Digital Writing projects take place, the results often do not appear publicly on the Internet. I feel that making the writing publicly available for other children, relatives, friends and teachers (and many more) to read and to respond to - is a vital aspect of Digital Writing and I will return to this point later in this report.

"There seem to be lots of online maths resources, but I don't find so many for use in literacy and which are appropriate for use with a whiteboard." *Teacher/ICT coordinator*, *Dragonsville*, *pilot*

Digital Writing, Gavin Stewart (a participant in WftF) works occasionally with schools to produce writing which is presented in a new media format, e.g., *Habitatiad* (http://www.gavinstewart.net/cybertext/habitat/habitat7.html), a "new media poetry experience" celebrating the varied habitats of Stockgrove Country Park, Bedfordshire, a collaboration with Year 3 at Heathfield Lower School. Even in this project, the children's contributions are traditional poems, which can be read in print format as easily as online.

Gareth Pitchford's Flash poems at Edleston Primary School stand on their own as good examples of creating animated poetry in the classroom. See, e.g., Beans and School¹⁴.

Other Digital Writing can be seen in projects coming from other approaches, such as:

Game playing: Adventure Author¹⁵, a prototype for NESTA Futurelab, is "a game-authoring tool designed to support interactive storytelling skills through the use of game technologies". I'd class this as Digital Writing.

Digital arts: the project *Electric December*, an online digital "advent calendar" (http://www.electricdecember.org/) is one of the most successful digital arts projects which involves both artists, communities and young people in groups and schools. It involves writing in its many forms, but the new media aspects are the artists' contributions, so the children themselves are not writing digitally.

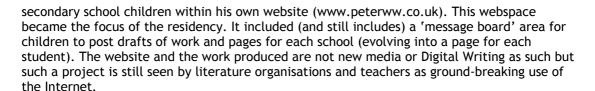
Digital storytelling: this term is coming to mean working with digital video, but involves writing in the sense of writing a script. This I'd exclude from Digital Writing because the production processes - while technically digital - owe more to traditional film than to new media practices.

Email projects: for example the Writing Together project *In Person and On-line* with Peter Wynne Wilson in Birmingham¹⁶, during which Peter created webspace for work produced by

15 http://www.nestafuturelab.org/showcase/adventure_author/adventure_author.htm

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¹⁴ Primary Resources: Online Activities http://www.primaryresources.co.uk/online/index.htm



Children's own writing: Most of these kinds of projects are collaborations between young people and digital artists and writers. We are only beginning to see the young people themselves writing in new media. Nonetheless such experimentation is beginning to happen. The UK Children Go Online survey¹⁰ revealed that an amazing 34% of 9-19 year olds using the Internet had created their own websites. All of these involve text and many involve an element of creative writing. Fan fiction is a popular pastime, often involving contributing to ongoing linear fictions in a forum environment. These are generally based on popular music groups or films or TV shows popular with teens, such as *Buffy the Vampire Slayer* and *Lord of the Rings*.

Young people also create interactive stories for one another using web-based tools including publicly available javascripts. To study children's own websites and how they use them to write would be a fruitful area of research. It appears to me from my observations of the way that teens write, that much of this kind of activity takes place in the "Deep Web" (that is, the areas of the Web which are password protected and don't come up on search engines), based in Yahoo groups or MSN groups and publicised by the digital equivalent of "word of mouth" amongst the young people themselves. The sites constantly come and go. One example including both fan fiction and interactive stories is: http://www.westlifeweb.com/fans/storycorner.html

Storytelling with Powerpoint is another way in which teachers are now being encouraged to develop pupils' story writing skills. Powerpoint is favoured because pupils are already required to use it in the ICT curriculum. For an example see *Interactive Stories* from Year 4 at All Saints CE School, Leek, Staffs¹⁷.

I have reservations about the use of Powerpoint for Digital Writing, because Powerpoint is designed for business, not creative use. It requires a lot of skill to use and these skills are not transferable to other programs making it difficult for a young person who develops an interest in Digital Writing to go on to create more complex works. Learning HTML for example is a useful skill and one that can be built on to create gradually more sophisticated works. Nonetheless creative Powerpoint is gaining ground, being used by artists such as David Byrne¹⁸, digital writers and elearning developers as well as young people.

3.4 Kids on the Net background

Kids on the Net was founded in 1998 as part of the trAce Online Writing Community (later Centre). It was initially based on a simple model of inviting children at school, home or elsewhere to submit writing in a variety of categories such as Sports, Poems, Stories, or News. I took it over in 1999 with the backing of sponsorship from Experian headquartered in

TO SERVICE THE PROPERTY OF THE

¹⁶ Writing Together 2003/4 In Person and Online, Writer: Peter Wynne Willson, Case Study, http://www.booktrust.org.uk/writingtogether/online_cs.html. The work produced can be read at http://www.pwynne.hostinguk.com/writing_together.htm)

¹⁷ http://www.allsaints-leek.staffs.sch.uk/interactive_stories1.htm, accessed 19/01/05

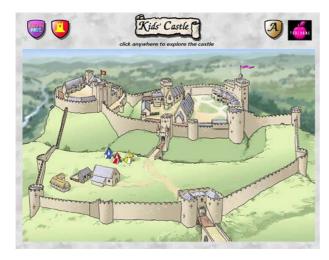
¹⁸ http://www.davidbyrne.com/art/eeei/index.php , accessed 31st March 2005

Nottingham. Kids on the Net has always aimed to provide a voice for young people and a place where they can share their thoughts, feelings and opinions with one another.

The feedback facility on the site shows how the young people respond to one another's work and to problems about their lives.

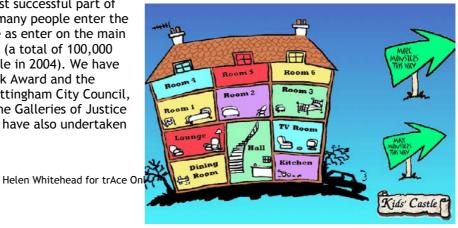
Seeing the potential for collaborative, interactive, hypertext and other writing we went on to develop a range of projects featuring interactive, collaborative and increasingly Digital Writing.

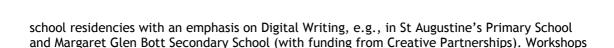




The specifically digital projects include Monster Motel (below right) - a project which invited children to submit a description (and sometimes picture) of a monster - and Kids' Castle (left) - a fictional but historically accurate castle based on Nottingham Castle in 1480. Students can drag their mouse over the parts of the castle to select and enter sections such as the Royal Apartments, the Chapel, the Great Hall, the Tournament, and more. On entering each section, students learn the history behind the section and then have the opportunity to do a writing activity (with galleries of submitted writing), or other interactivity such as play a word game.

Kids' Castle is still the most successful part of the website: six times as many people enter the site on a Kids' Castle page as enter on the main Kids on the Net homepage (a total of 100,000 visitors entered Kids' Castle in 2004). We have also created the Big 3 Book Award and the Primary Parliament for Nottingham City Council, and The Net Rules! with the Galleries of Justice museum, Nottingham. We have also undertaken





have been held for schools, children's libraries and arts festivals.

Although based in Nottingham, the site has always been international and has young contributors aged from under 5 to 19 from over 140 countries including the Netherlands, Malta, Israel and India. Overall both users and submissions have grown threefold in the two years of Writers for the Future. During the Writers for the Future project, the numbers of UK users of the site have increased hugely (e.g., from 2.72 million hits in 2003 to 4.66 million hits in 2004). This reflects the increased Internet use at home and in schools since 1998. In 2004 the site received a total of 1,150,000 separate visits: over 100,000 hits per day. (Each visitor will "hit" a number of pages during their visit.)

The website is founded on content written by children themselves. As well as using it at school, children use it independently at home or at libraries in leisure time. They use it for developing their own writing, and for learning about themselves and each other. Much of the writing is done in the classroom however, as part of a literacy, English or (often with Kids' Castle) history lesson. It can often be seen (from the notification emails received when someone contributes to Kids on the Net) that a whole class has contributed to the site and that some of the children have gone home and carried on writing on the site at their home computers in the evening, even bringing their siblings to the site 19. Lucy Barker, one of the winners of the Dragonsville launch writing competition, entered the competition when her younger sister introduced her to the site after using it at primary school.

3.5 Our pilot project funded by NESTA

The first Teachers' Portal was built in July/August 2002 with funding from the National Endowment for Science, Technology and the Arts (NESTA) as a pilot project. It aimed to provide teachers with real support to use Kids on the Net, and particularly its Digital Writing resources, in their classrooms, while still delivering the current curriculum.

The Portal contained a series of resources, based on existing Kids on the Net material, that were designed and written by teachers Andy and Barbara Seed (in collaboration with Helen Whitehead of Kids on the Net) to fulfill stated objectives of the National Literacy Framework for Key Stage 2. They included at least one resource for each term in KS2, plus eight fully developed resources and one specially developed hypertext resource along with supporting downloadable information and links to live projects.

The Portal provided information for teachers about new forms of writing, including hypertext, collaborative online writing and other forms of new media, plus resources to back up teaching, and tools to develop such writing in the classroom and link it to the curriculum.

The resources were written by teachers and evaluated by teachers. The evaluations indicated that the resources were appropriate for the classroom, and helped teachers use Kids on the Net as a stimulus for children to write, as a collaborative online writing resource and to introduce the potential of hypertext.

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¹⁹ See for example the Foxford School webpage http://kotn.ntu.ac.uk/diff/foxford.cfm: Dominic (14) really caught the poetry writing bug and other contributions to the website from Coventry shortly after the workshop were from siblings of the workshoppers (personal communication from the school).



3.5.1 The "access ramp" model

As part of this pilot project we proposed a model for introducing this work into the classroom and investigated this model in our action research. Teachers readily accept Kids on the Net as an online resource for teaching "traditional" literacy - the crafting of stories, poems and other writing. For example, one of the search terms that teachers use to find Kids on the Net is "personification poems", covered at least twice in the Literacy Strategy for KS2. Although displayed on the Web, these poems are not Digital Writing in themselves. Using this resource required of the teacher no specialist skills other than using a browser.

We are also acutely conscious of the constraints under which teachers work. The model therefore was designed as an "access ramp" to gradually introduce teachers to the elements of Digital Writing through work with direct relevance to the curriculum, taking them from their current skill level to the level required to undertake Digital Writing projects with confidence.

We aimed to provide a series of projects that would encourage teachers with good ICT skills to explore creative use of these skills in literacy teaching, and to inspire those just starting to use ICT to develop their skills and look "outside the box" towards self-propelled innovation. As part of these projects we intended to provide online tools to make the process of creating a new media project easier for teachers yet adaptable to different skill levels.