



Early Years Reading: ICT and early literacy: multiple literacies at work

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Olivia O'Sullivan encourages multiple literacy.

In this final article in BfK's Early Years Reading series the emphasis is on electronic texts. Olivia O'Sullivan argues that teachers need to help children become flexible and knowledgeable readers of many texts, able to find and read the best for their purposes. She suggests lively texts to encourage children's multiple literacies. <!-- break-->

Visit a nursery or Reception class these days and you're likely to see children reading books on screen, as well as paper books. You might also see digital photographs, video, multimedia presentations incorporating children's drawings and their spoken and written texts, and role play involving mobile phone conversations and texting. You will be witnessing multiple literacies at work.

Computer and internet use at home

The ICT revolution happens before children enter the school gates. British children are some of the biggest internet users in the world. Among parents of 3-4-year-olds, 64% have a personal or laptop computer at home and 84% of these parents say that their child uses a computer at home. (BECTA 2003)

Experts agree, therefore, that the critical issue for practitioners working with young children is not whether computers should be used but how they can be used to best effect. (Haugland, 2000; Learning and Teaching Scotland 2002; NWREL 2001)

Changing definitions of literacy

Our notions of literacy and texts are constantly being transformed by developing information and communications technologies. In considering how ICT supports early literacy therefore, my premise is that ICT does not simply exist to support the development of 'conventional' literacy. ICT literacies are important in themselves.

People sometimes ask 'Are computers taking over from books?' but I think that's probably the wrong question. The point, I think, is that we need to help children to become adept, flexible and knowledgeable readers of both paper and electronic texts, who are able to find and read the best texts for their purposes. Personally, I get enormous pleasure from reading paper books. But that isn't to say that I can't read a novel on screen - I have several in e-book form on my handheld computer. In terms of access to information, I can't think of any paper text that offers the same limitless possibilities as the world wide web, and I tend to feel more comfortable in reading information on screen. However, these are personal preferences.

Some think that the 'non-linearity' of hypertext calls for new ways of reading. *Hypertext* is the name for the system of

coding that allows readers to navigate their own path through a series of hyperlinked pages or screens, as on the web. *Hypermedia* describes texts, such as those on CD and the web, where hypertext is combined with graphics, sound, interactivity, animation, and video. Hypermedia texts do offer young children new reading and authoring possibilities and for most children, seem to be intrinsically motivating, enjoyable and connected with play rather than work. We can't really therefore afford to ignore them.

The following texts offer support for developing conventional reading skills alongside new skills required for reading and writing electronic or hypermedia texts.

Living books

Living Books on CD are one of the most familiar ways ICT has been used to support early literacy over the last decade. Conceived in the early 1990s, probably the best examples are those published by Broderbund. Titles such as **Just Grandma and Me**, **The Tortoise and the Hare**, **Arthur's Birthday**, **Green Eggs and Ham** are familiar to many foundation stage and Key Stage 1 practitioners. Introducing these recently to a group of young adult play workers I was struck by the way these texts still offer pleasure to nearly all adults and children who meet them for the first time. It is sad that there seems to have been little real innovation since these Broderbund titles.

Living Books are similar in concept to paper texts in that the reader usually progresses from one page to the next in a linear way, although children can click on 'hotspots' to trigger off events inside each screen. These texts can act as a bridge for young children between the ways conventional paper texts work and the non-linearity of electronic texts such as information CD-ROMs and websites. Living Books include animations, a range of sounds, music and opportunities for interaction. In addition most Living Books allow the reader to click on individual words to hear them read aloud.

The following dialogue occurred in a South London nursery class as three 4-year-olds, George, Louise and Elly, were working independently with **The Tortoise and the Hare**, a Living Book. They were familiar with the Living Book and, as they listened to the text read aloud, their conversation was a mixture of discussion of the text and what they would like to activate in the text:

Louise: *There's that one* (pointing at the screen)

George: *That was funny*

Elly: *Shall I do that one?* (she controls the mouse)

George/Louise *Yeah* (All three join in with the song)

George *Do that*

Louise *Do that. That's what my brother says. You naughty girl.*

Don't do that again (addressing the hare on screen). Go

in your house or I'll smack you .

Next page please, you do the green one (points to the forward arrow), *that one, that one?*

George (Now has the mouse)

Yeah! The race. (George clicks on the houses on screen, each of which has a song, he and Louise sing along with

each house's song.)

Louise *Do that one again George* (meaning click on a house)

No one comes to the ice-cream man. Press the ice-cream man.

The turtle's gonna come?

At the end, George took the mouse, went into the 'options' and 'credits' menus and managed to find his way back to the beginning of the story.

So what were the children learning? In terms of developing familiarity with print, teachers have observed how children's early print awareness has been heightened through using Living Books – for example using the feature that highlights text. (Medwell, 1996) And, as in the example above, there are opportunities to create their own narratives and meanings from the story, and to talk about characters and events. Children also make conscious decisions to replay or re-visit certain pages. At the same time they are learning to understand texts on screen e.g. icons, navigational features and 'hotspots'. Living Books also provide excellent opportunities for talk at the computer – something which the 'computer suite' culture in many primary schools has in a de facto way tended to eradicate. There is also evidence from teachers on courses at The Centre for Literacy in Primary Education (CLPE) that some children, particularly boys, are drawn towards texts on screen prior to engaging with paper-based texts.

Evaluating text quality

The quality of Living Books is varied – and there are relatively few titles. The young children in the South London nursery sang along with **The Tortoise and the Hare**, but the text has few qualities of rhythm, rhyme and pattern which a teacher or parent might look for in a text as a support for early reading. Some practitioners would agree with me that the visual and audio support compensate for that – others would not. There have also been criticisms that there are too many opportunities to click on animations which detract from the central narrative.

Julian Grenier, an experienced nursery head teacher, has offered the following criteria for evaluating texts:

- * Will children get deeply involved in this Living Book?
- * Will the Living Book encourage two or more children to share attention, talk about what they are doing? Collaborate?
- * Will children become involved in the story or be distracted by other features?
- * Will the CD encourage children to create their own narratives?
- * Will the CD encourage an awareness and knowledge of print: that it conveys meaning or 1:1 matching of printed and spoken words.

TEEM (Teachers Evaluating Educational Multimedia) <http://www.teem.org.uk/> provide helpful reviews of most software and websites.

Texts on CD

There are very few electronic texts to which I could give a wholehearted 10 out of 10, in the way that I could recommend a host of picture books. However one particular favourite of mine from the Broderbund series is **Sheila Rae the Brave**. Firstly the text, animations and songs are full of humour and fun, even on multiple re-readings. Secondly, the heroine of the story is a feisty girl mouse, a real character.

Living Books also support children at the early stages of learning English – there is always plenty to talk about and, in

general, they offer good models of English, with highly contextualised visual and audio support.

Mantra, longstanding publishers of multilingual texts for children, have made a number of forays into CD production. As well as their helpful multilingual dictionaries on CD in a range of languages, they have recently launched a series which they call e-books ? although in fact they are books on CD. The books are based on traditional stories. Instructions are available in a range of languages, though unfortunately not the stories themselves, which seems a sad omission. They do have opportunities for children to choose their own images and write their own versions of the stories however, which give them a welcome open-ended quality, and will make them a valuable resource for slightly older children.

Reading scheme publishers are capitalising on books on CD and on line. Oxford Reading Tree has produced CD ROMs and an online facility to accompany its reading scheme books. Teachers in Key Stage 1 report these as being more popular with children than the paper texts, although there is little animation or interactivity. I don't like the idea at all of children's online or offline reading diet being dominated by one scheme ? but you can sample the online site for free by signing up on the website <http://www.oup.com/orto/> .

Kingscourt produce a series of texts based on traditional stories such as **Cinderella** , **The Billy Goats Gruff** and **The Gingerbread Boy** . While these are less fun than the Broderbund books (and less interactive) teachers like the word level activities which are added on to the stories.

Books on line

Books on line cannot carry the range of animation, sound and interactivity available on a CD. However, particularly with the growth of broadband in schools and nurseries, as a free resource some are worth at least considering for the reasons mentioned so far. I would suggest book-marking sites in advance so that they can be easily visited and re-visited ? it's surprising how many mistakes you can make typing out a web address. Many of these websites also require the downloading of free plug-ins (additional small programmes) such as Flash, Shockwave, Quicktime and Real Player. Usually a link is offered from the website to the free ?download? website. (When you've done this once, you will have no qualms about doing it again ? the computer actually does it for you. It sounds more complicated than it is.) It's a good idea, to avoid disappointment, to try out the website before use and ensure that necessary plug-ins are downloaded.

Some sites worth exploring are:

CBeebies Story Circle (<http://www.bbc.co.uk/cbeebies/storycircle/>) has a range of stories on screen, including some written in languages other than English, but there is no sound ? you have to read the stories yourself!

Nursery rhymes and songs are good for supporting early reading. The Tweenies Sing-a-song section has an alphabetical find-a-song facility (<http://www.bbc.co.uk/cbeebies/tweenies/>). If you download the free version of Real audio you can hear the songs being sung.

You can also try out stories created in a number of European languages on <http://www.eurotales.eril.net/contents.htm> . This is a European project and there are simple versions of many stories, illustrated by children. Each story offers the opportunity to write and print your own version.

A number of sites offer access to children's story books on line: Children's Storybooks Online (<http://www.magickeys.com/books/>), the Rosetta Project (<http://www.childrensbooksonline.org/>) and International Children's Digital Books on line (<http://www.icdlbooks.org/>). Some of these texts are scanned versions of out of print children's books, and are occasionally very interesting for adults. However, in general, the quality is alarmingly variable.

Fox in Sox and other activities on www.seussville.com [3] provides an anarchic approach to rhyming words, and a range of activities which include making your own electronic story.

The adult's role

The role of the adult is essential in supporting the use of these CD and web-based resources with young children. It is the adult who demonstrates how to navigate the text and who can extend children's language and literacy learning. An adult working with small groups is an ideal context for reading electronic texts. Once children are confident in using the text, they can read alone or with one or two others.

Reading for information

Information CDs such as the Dorling Kindersley **Become a Human Body Explorer** (see also **Science Explorer** , **World Explorer**) provide much visual interest even though the text may be above children's reading level. Children also enjoy the more game-like Magic School Bus CDs (**Bugs** , **Oceans** , **Dinosaurs** etc) There are, of course, websites for children on every conceivable topic. Even if children are too young to navigate the web alone, an adult can do it with them or for them, and discuss the process at the same time. Information searches can be linked to class, group and individual interests. Outings can be previewed on line or re-visited afterwards. One teacher looked up the Pyramids after commenting on a child's building in the block area. Ask Jeeves (www.ajkids.com) is a good children's search engine which allows whole questions to be typed into it.

For good web safety guidelines on policy and procedures see <http://www.safety.ngfl.gov.uk/schools/> and <http://www.parentsonline.gov.uk/safety/index.html> .

Children authoring their own electronic texts

Multimedia authoring programmes such as Hyperstudio and Powerpoint are now frequently being used by early years practitioners to jointly author multimedia texts with young children, just as they make paper books together. Teachers working at CLPE have made their own versions of picture books such as **Brown Bear, Brown Bear What Do You See?** , **Owl Babies** , **Rosie's Walk** and many more. They also regularly create information texts involving text, sound, animation, digital photographs and sometimes video. Creating hypermedia texts not only involves shared writing with young children but making choices about images, animations, transitions, use of sound, voices and music. This kind of activity does a great deal to inform children about the construction and reading of hypermedia texts. It also creates meaningful opportunities for reading and writing resulting in highly personalised texts for children to return to over and over again.

Conclusions

ICT has much to offer children's literacy ? in the broadest sense of the word, particularly if it is focused on the needs and interests of children rather than on ?drill and skills?. I would strongly suggest that all software is evaluated before purchase for developmental appropriateness, content, open-endedness and ease of use. I would also plead for computers to be seen as contexts for talk and collaboration rather than solitary play. We must also advocate much more creativity from producers in the development of hypermedia texts for young children. For the present, a few multimedia Living Books, information texts (on CD and online), classroom-created hypermedia, and tools such as the digital camera and video, seem to offer the best possibilities for supporting children's early literacy.

Finally ? computers are expensive resources and not magic solutions. They shouldn't be bought at the expense of books, play materials and other essentials. They can, when used knowledgeably, considerably enhance all aspects of learning, including literacy.

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<http://www.ericdigests.org/2000-4/young.htm>

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<http://www.Itscotland.org.uk> [5] / [earlyyears/BenignAddition.asp](http://www.Itscotland.org.uk/earlyyears/BenignAddition.asp)

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North West Regional Educational Laboratory NWREL (2001) Australia, *Technology in early childhood education, finding the balance*

<http://www.nwrel.org/request/june01/intro.html>

NGfL Superhighway Safety is a wide ranging helpful resource for net safety guidelines:

<http://www.safety.ngfl.gov.uk/Schools/>

Parents on line, protect your children on line: <http://www.parentsonline.gov.uk/safety/index.html>

TEEM (Teachers Evaluating Educational Multimedia) <http://www.teem.org.uk/> provides helpful reviews of most educational software and many websites

Children's Resources

Just Grandma and Me , **The Tortoise and the Hare** , **Arthur's Birthday** , **Green Eggs and Ham** , **Sheila Rae the Brave** , Broderbund Living Books, available from: www.taglearning.com ; www.amazon.co.uk

Mantra multilingual dictionaries on CD and E-books are available from <http://www.mantralingua.com/>

Cinderella , **The Billy Goats Gruff** , **The Gingerbread Boy** , Traditional Fairy Tales from Kingscourt.

Oxford Reading Tree Talking Stories CD ROMs are available from www.oup.com/primary , www.amazon.com

Kingscourt/McGraw Hill Inside Stories are available from <http://mcgraw-hill.co.uk/kingscourt/insidestories.htm>

CBeebies Story Circle <http://www.bbc.co.uk/cbeebies/storycircle/>

Tweenies Sing-a-song <http://www.bbc.co.uk/cbeebies/tweenies/>

Eurotales, a European story project <http://www.eurotales.eril.net/contents.htm>

The Witches' Stew by Everett Morse. Children's Storybooks online. <http://www.magickeys.com/books/>

The Rosetta Project <http://www.childrensbooksonline.org/>

International Children's Digital Books on line <http://www.icdlbooks.org/>

Fox in Sox from www.seussville.com

Dorling Kindersley **Become a Human Body Explorer** (see also **Science Explorer** , **World Explorer**) is available from www.amazon.co.uk [6] and other software suppliers.

Microsoft Magic School Bus titles (**Bugs** , **Oceans** , **Dinosaurs**) are available from www.amazon.co.uk [6] and other software suppliers.

Search engines Ask Jeeves www.ajkids.com [7] and Yahoooligans <http://yahooligans.yahoo.com/> are two child-friendly search engines.

For net safety guidelines on policy and procedures see: NGfL Superhighway safety <http://www.safety.ngfl.gov.uk/schools/> , a wide ranging helpful resource.

This article is part of a series about Early Years Reading. Click on these links to read companion articles:

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- [5] <http://www.Itscotland.org.uk>
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- [7] <http://www.ajkids.com>
- [8] <http://booksforkeeps.co.uk/./150/161>
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