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Reading Transformations

Oh, books, what books they used to know,

Those children living long ago!

So please, oh please, we beg, we pray

Go throw your TV set away,

And in its place you can install

A lovely bookshelf on the wall

In Roald Dahl's *Charlie and the Chocolate Factory* (1964), just after the young television addict Mike Teavee has jumped into a TV set and shrunk to the size of 'a midget', the Oompa-Loompas launch into a three-page diatribe against the evils of children watching too much television, which will, in their view, make their 'powers of thinking rust and freeze'. Here, Dahl reflected the concerns of many for whom the written word represented the most highly valued form of literary expression, and for whom engaging with new media was by definition an intellectually inferior activity to book reading. Thirty years later, Margaret Mackey warned that 'to talk about children's literature, in the normal restricted sense of children's novels, poems and picture-books, is to ignore the multi-media expertise of our children' (Mackey, 1994:17). As a new generation of readers now grows up in the dawn of the 21st century, this chapter explores the forms of literature they are encountering in a range of media, whether their experiences of literature are substantially different from those of older generations and what 'reading stories' means in today's multimedia world. Consideration is given to the literary landscapes of children aged 3 – 11 years in different social settings, both in and out of school, and to the different ways they experience a range of literary texts, focusing on print, interactive and electronic forms of literature, and transformations of literary originals in new media.

A brief history of literature in our time

The historical development of literature for children reflects changing attitudes towards childhood and changing practices around literature. The contemporary children's author Elizabeth Laird talks about the influence on her writing of growing up in a deeply religious family, where stories were considered to have an inherent truth imbued with profound, moral meanings that readers would muse over[1]. This sharing of *literature as*

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[1] Paper presented to UK Literacy Association Children's Literature and Creative Curriculum Conference, The British Library, London. http://www.ukla.org/site/conferences/event/childrens_literature_conference

scripture for discussing morality has to some extent been superceded in the western world by the broader notion of *literature as education*, where others' insights are used to introduce children to a diversity of social and cultural worlds. Alongside a continuing emphasis on *reading for pleasure*[2], the concept of *literature as entertainment* has emerged as stories have wandered from the printed page into new media, such as film, television and online environments. Many traditional tales have endured these transformations, whilst others are more contentious. What, we might wonder, would the Oompa-Lumpas make of the versions of traditional tales and nursery rhymes now available in online children's games and animated narrations?

21st century children's literature

The prevalence of multi-media as part of daily life in developed countries means that many children today encounter a wide range of static and interactive texts, in print form and on handheld, computer, film and TV screens. A large-scale study of children's interests in new media found through surveys and interviews of over 1,500 six to seventeen year olds that "*books are widely seen as old-fashioned, boring, frustrating, and on their way out ...*" (Livingstone and Bovill, 1999: 19). What might be the implications of such findings for the future of children's literature? New technologies offer new horizons for literature, both for the transformation and representation of traditional printed books, and for the emergence of new literary forms of expression, such as digital narratives in electronic games, on-line hyperfiction and e-poetry. New media are 'not simply changing the way we tell stories: they are changing the very nature of story, of what we understand (or do not understand) to be narratives' (Hunt, 2000:111). They are blurring the boundaries between author and reader, and stretching the already highly contentious boundaries of what literature is.

This chapter therefore adopts an exploratory and potentially controversial definition of literature, and considers examples of a broad and inclusive range of genres of fiction, rhymes and poetry encountered by children in diverse media, which go beyond the familiar modes of printed words and illustrations that are typical of the traditional printed page.

Multi-media literature and multimodality

Before continuing it will be useful to clarify what is meant by the terms *medium/ media*, *mode, multimodal* and the related term *affordances*. *Medium* refers here to the way that literature is disseminated, whether through handwriting on paper, a printed book, the radio, audio recording, television, film or computer. The forms that media take, and how they are used in daily life are dependent both on technological invention and on the economic prosperity and cultural values in a given society.

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[2] http://www.literacytrust.org.uk/vitallink/readingforpleasure.html

The term *mode* derives from social semiotics (Halliday, 1978), and refers to the way that meaning is represented, for example, through speech, writing, image, body movement, gesture or gaze. Modes of communication are shaped over generations by the ways that people use them in their social and cultural lives. Different modes offer different potentials, or *affordances*, for the expression of ideas. In a written text, what can be expressed is shaped to a large extent by the established rules of grammar and lexis, whereas an illustration may afford more potential to convey the precise shape of an object. Modes also have dimensional affordances: the modes of speech and writing are governed by a linear logic of sequence, with one element following or preceding another. By contrast, still images (e.g. photographs, paintings, line drawings) are governed by a non-linear logic of space and simultaneity, and relationships between the elements are communicated through positioning (near or far away, central or peripheral etc). Moving images are governed by the logics of both spatiality and sequence. Kress (2003) suggests that 'the world told' is very different to 'the world shown', and proposes that the increasing prevalence of communications technologies is engineering a profound shift in the ways we engage with texts, both receptively and productively.

The term *multimodality* takes into account how the range and combinations of modes used in any act of expression all contribute to an 'orchestration' of meaning (Kress, Jewitt, Ogborn and Tsatsarelis 2001), where the overall meaning is more than the sum of its different modes. For example, the medium of printed books has historically conveyed literary meanings primarily through the modes of printed words and page layout, sometimes supplemented by illustrations. More recently, interactive books have combined these with the additional modes of spoken language and sound.

As an example of how these terms can be applied, *Vignette 1* illustrates how literary meanings are orchestrated through multiple modes in digital literary texts.

Vignette 1 here somewhere

As previously mentioned, media and modes are located in and shaped by social contexts and 'new' media connect with the conventions of 'old' media (Manovich, 2002). Unsurprisingly, therefore, we can see in *Vignette 1* that although the computer screen is a comparatively new medium for literature, there are many characteristics to the story sequence that mirror the performance of reading a traditional book. The falling blossom between the scenes is an on-screen equivalent of turning a page, as a new scene appears when the blossom clears. The narrator asks questions as a parent or carer might do, or as 'Listen with mother' and 'Watch with mother' radio and television programmes have done for decades. If Jamie were sharing a traditional storybook with an adult, he might be expected to respond to a question, but in this instance, he does not – here his response is embodied in the physical action of clicking the mouse over an icon, rather than in words. Jamie watches with keen interest when his favourite character *Igglepiggle* prepares his possessions ready for a journey. The artefacts he chooses are familiar, such as his much

loved and ever-present blanket, and each carries the resonance of a story in its own right, making intertextual reference to stories that Jamie has encountered on other occasions. The narrated story is therefore being told at many different levels at once, evoking narratives from Jamie's prior experience and knowledge and enriching the simple tale as it unfolds.

Unlike a story book however, which usually begins at the first page and follows a predetermined sequence until the end of the book, this on-screen narrative experience offers Jamie a sequence of choices about what he views and in what order, and the links between the screens mean that each 'reading' can be different. Although his options are limited by the potentials of the program, Jamie is able to make independent choices in his selection, but accessing these options requires a relatively high level of literacy in reading and interpreting on-screen icons and layouts, and physical dexterity. Less confident/ less experienced users might need the support of a more experienced peer or adult in order to negotiate their way through the myriad of hyperlink choices available without becoming frustrated.

This does not appear to be an issue for Jamie, though. When 'reading' these on-screen narratives, he uses a combination of modes, including whole body movements to position himself in relation to the screen, hand and finger movements to manipulate the mouse and click on icons, and arm and hand movements when he moves to touch items on the screen. To access the narrative, Jamie must either understand the meaning of seemingly obtuse symbols, or 'read' the words (either by reading, which he does not seem to do, or by recognizing word shapes and sequence). A non-familiar reader of *In the Night Garden* might wonder why a flower icon is used to symbolise 'bedtime story', but these are well known icons for Jamie, that make intertextual reference to the television series. He occasionally (although rarely) talks to the on-screen characters, and imitates the characters' activities by moving his body in time with theirs. Similarly, the on-screen story exploits multiple modes; the narrative is built up through combinations of the characters' actions, their lilting if unintelligible 'talk', comic sounds, some jingles between scenes, voice-over narration, changes in screen layout and changes of colour and scene. At the age of four, Jamie is already adept in his manipulation of the keyboard and mouse, and in his reading of the screen, so he is able to become immersed in the multi-sensory combinations of symbols, sounds, language, images and animations.

Literature and multi-media literacy practices

Vignette 1 highlights how literature is experienced as part of everyday, social practice: Jamie is exploring a narrative, mostly on his own, towards the end of the day while his mother is preparing a meal. Viewing literacy as social practice takes into account how literary experiences occur in different social and cultural contexts and for different purposes (Street, 1984; Barton and Hamilton, 1998). A common practice around literature that has occurred regularly in many children's lives is that of adults reading or telling 'bedtime stories'. Alongside their literary encounters at home, children also

engage with literature in a variety of social practices in school, and their experiences of literature travel with them to and from home and school.

In *Vignette 1*, Jamie is enjoying a story as part of a relatively new social practice of using computers for leisure, in a technological world where increasingly the same digital tools are used for work and leisure. The purpose of the particular event described appears to be partly educational - he is learning about the themes of the narratives, such as friendship and planning, about how to access stories on a computer, and he is developing complex skills that are essential for computer literacy. At the same time, he is experiencing the stories for entertainment - the activity is enjoyable and is keeping him occupied, safe and happy for a short time while his mother cannot give him her full attention. The narratives of *In the Night Garden* are also present amongst his peer group in preschool, where his knowledge of the story lines and characters acts as a tool for social networking, allowing him to be included in other children's activities as they incorporate elements of the familiar narratives, songs, rhymes and characters in their make-believe play.

Multi-media exploration of traditional literature

Given that many children now have access to a range of media during their leisure time, and that there is strong evidence suggesting a decline in 'reading for pleasure' at home (Livingstone and Bovill, 1999), educational settings can be a prime site for children's literary encounters. More enlightened educators have begun to explore how new media and popular culture can be combined to engage children's motivation and enjoyment of literature. For example, one multi-ethnic East London primary school in England has developed a programme of work for 9, 10 and 11 year-olds that explores traditional print literature through different media (Woodberry Down Primary School, 2007). Here, children have followed 5-6 week explorations of Beverley Naidoo's *The Other Side of Truth*, and Benjamin Zephaniah's *Refugee Boy* as cross-curricular multi-media projects. These explorations include the creation of on-line blogs about the narratives and themes in the books, recording mock radio interviews with the characters, and exploring cultural references within the narratives that overlap with the children's out-of-school interests, such as making their own musical productions and recordings of Nigerian, Ethiopian and Eritrean music. By drawing on both new media and popular culture to explore literature, the educators have pulled the children's out-of-school interests and skills into the classroom, weaving together the disparate strands of their lives to promote their enjoyment of literature and to provide what Marsh (2005) refers to as a coherent and affirming framework for learning.

Less inventive yet contentious approaches have been adopted commercially to promote classical literature through children's on-line and DVD book resources, where literature already published in book form can be experienced on screen. Often, readers can select the font type and size, and can choose from options of accompanying sounds/ music and/or a narrator to read the story aloud. Some of these representations lack the kinds of creative interpretations of literature through new media discussed above, and they make

scant use of the affordances of the multiple modes potentially available. For example, a digital version of *Alice's Adventures in Wonderland*, where the original, written text is presented with some illustrations in the margins, accompanied by short, and rather tinny excerpts of classical music played as each chapter opens[3]. By contrast, the BBC television channel *CBeebies* has an online web resource of a range of new and classic children's stories, including a cartoon version of excerpts from Shakespeare's *A Midsummer Night's Dream* with sections of speech which reproduce the original 16th century written text. In the *CBeebies* adaptation, the on-screen presentation is dominated by still and moving visual images, with the written text appearing at the base of the screen, changing colour as the narrating voices read the words[4].

Illustrated and interactive children's literature

> *Alice was beginning to get very tired of sitting on the bank, and of having nothing to do: once or twice she had peeped into the book her sister was reading, but it had no pictures or conversations in it, and where is the use of a book, thought Alice, without pictures or conversations?*

> (Lewis Caroll, 1865, *Alice's Adventures in Wonderland*)

Illustrated story books have long been and continue to be popular presentations of literature for young children, where authors and illustrators draw on the affordances of pictures to motivate children's interest, adding to or contradicting the written narrative, or portraying multiple narrative voices. In John Burningham's books about *Shirley* (Burningham, 1992; 1994), words and images tell the story of a typical family visit to the beach, or Shirley taking a bath, while further images with no words show Shirley's imagined, exciting adventures swashbuckling with pirates and riding bareback with knights in shining armour.

Publishers as early as the 18th century realised the interactive potential of illustrations by making flaps to lift and tabs to pull, creating the illusion of movement (see Reynolds, 2007). Once luxury items, 'pop up' books enjoyed a resurgence in the late 1970s and 1980s, when interactive, illustrated stories became widely available and affordable, such as Eric Hill's *Spot the Dog* series, where children find and lift flaps to reveal characters mentioned in the words, requiring young readers' bodily involvement to animate aspects of the narrative. More recent creations include Robert Sabuda's pop-up *Alice in Wonderland* (2003).

In these examples of illustrated books, images dominate the page space, and are co-dependent with words for developing the sequential narrative. More recent forms of interactive illustrated books exploit the potentials of microchip technology, incorporating sounds and actions in the story-telling, as described in *Vignette 2*, where a 3-year-old boy is sharing an interactive 'Bob the Builder' book with his mother at home. 'Bob' is a

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[3] (*http://www.antelope-books.com/childrens/info.html*)
[4] (*http://www.bbc.co.uk/cbeebies/fullscreen/stories/dream.shtml*)

familiar character he has encountered across diverse media in popular TV culture, in comics and in books.

Vignette 2 here somewhere

In the brief exchange shown in *Vignette 2*, the mother conveys the relationship between the different elements in the task of 'reading' this book by using a combination of words, gaze and pointing gestures. The complexity of identifying and manipulating the different components in the task mean that Michael needs varying degrees of support, sometimes to recognise numbers and relationships between components, sometimes to press the stiff buttons. The mother uses gaze to gauge the help he needs on a second-by-second basis, fine tuning her responses to her interpretations of his needs, and respecting his plea for independence to complete the tasks himself. They continue the activity until they have finished the book, both evidently enjoying the 'reading'. Following his mother's talk, gaze direction and actions enables Michael to complete some aspects of the task, but the complexity of the many components means his enjoyment of this 'reading' is dependent both on his cognitive ability to recognise and match number symbols, his negotiation of the different artifacts of book and doll, and on his physical dexterity at pressing the buttons. This reading therefore is highly interactive and has several purposes: for education closely matched to a school numeracy agenda; for pleasure, as a highly valued time for mother-son affection and closeness; for entertainment and the thrill of identification with a familiar television story character and listening to an unfolding narrative told in the familiar voice of that character.

Interactive e-books and hyper-literature[5]

The comparatively sudden rise of computers, electronic games and the Internet as part of everyday life for many children has opened up new digital environments for experimenting with literary representations and narrative structures. Traditionally, narratives for children have tended to respect established generic traditions, to follow a logical and often linear sequence that begins, has a middle, and then ends. In the late 1970s and 1980s, under the dual influence of post-modernist trends and the rise in popularity of video games, a publishing craze of adventure gamebooks began to change this trend and to reflect children's popular culture interests, merging the genres of literary fiction and games. Mostly written with boys in mind, gamebooks offered readers choices in which story lines to follow, sometimes by rolling a dice to be directed to a numbered paragraph or page in an illustrated, printed text. In Rose Estes' gamebook series *Endless Quest* (published by Random House), the main character is referred to as 'you' in the text, but has a name, gender, and personal history, creating narratives that resemble miniature novels with many different possible endings.

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[5] These terms overlap, but 'interactive e-books' here describes electronic texts that offer 'readers' choices in which linear storylines they pursue, whereas 'hyper-literature' refers to non-linear texts which can be constructed variously through series of hyperlinks.

Digital media offer more varied potential for the ways stories are constructed, further stretching understandings of what narrative is. The traditional notion of a (single) creative literary author producing great works of literature dissolves when technology allows 'readers' to take on an authoring role by interacting with and redesigning texts, either working alone or collaboratively with other 'readers'. *In the Night Garden*, shown in *Vignette 1*, offers very young children an element of choice in the creation of their own short stories from a range of options about familiar events in the lives of their favourite characters, making each reading an active and intensely personal experience. Multi-user versions of story-making are also available on the popular *CBeebies* website, where young children can work together to select text to put in speech bubbles within linear cartoon stories, as shown in *Figure 1*. The site allows text to be inserted in any order, so readers are free to follow a logical order, or they can subvert the order, and create comical versions.

Figure 1: CBeebies (screen grab)

http://www.bbc.co.uk/scotland/aboutus/raw/play.shtml

Sites such as these are simple digital adaptations of traditional print activities that allow readers to contribute to the creative act by selecting narrative options. For more original literary creations, software tools are readily available for authors to explore hypertext writing. *Storyspace[6]* allows multiple narrative threads to be developed, where 'participatory readers' can interact with a myriad of options in a random order. This level of interactivity often creates spiralling rather than sequential storylines, where the author can retain control of the story variables, with a finite number of potential story resolutions, but because the structure is non-linear and complex, each reading can be unique. *Storyspace* is being used in a variety of settings, including primary, secondary and tertiary classrooms in the USA to help children explore new hypertext literary environments. Multi-user domains (MUDs)[7] permit multiple authors to contribute to story construction, offering an infinity of choices for readers, and a fundamentally different reading experience to traditional notions of solitary reading for pleasure.

A range of e-narratives for older children have begun to explore the multimodal affordances of words, images, movement and sounds to enhance the story experience. R.L.Stine's *The Nightmare Room* series[8] is an on-line interpretation for young readers of a classic horror story. The site opens with a voice-over introduction by the author, against chilling repetitive, muffled tones, reminiscent of entering a fun-fair ghost ride:

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[6] http://www.eastgate.com/storyspace/index.html
[7] 'Multi-user domain' is a term used to describe multi-player computer games on the Internet, where multiple players meet to play a game or construct an online narrative in a virtual world
[8] http://www.thenightmareroom.com

Welcome, I'm R. L. Stine

You have left the world you know behind

You are now entering a chilling shadow world

Where you will live your darkest fears

Go ahead and scream no-one can hear you and there's no escape[9]

With the spooky background sounds ever-present, the reader can use the cursor to navigate around a series of photographic images, and can select whether to read the short story, explore other stories, capture images, link to a gaming site, download screen savers or, for educators, download a free writing tool kit to help children create their own digital stories. In this e-narrative, the story pages are offered in numerical sequence, but they can be accessed in any order.

Figure 2: On-line horror stories in 'The Nightmare Room' (screen grab)

Hyper-media narratives make further use of the affordances of on-line media to offer narrative options through hyperlinks. Guyer and Joyce's *Lasting Image* [10], set in post WW2 Japan, presents images alongside words in a traditional illustrated story format, but with some parts of the illustrations blurred and some clear. By placing the cursor over the clear illustrations, the 'reader' can click on hyperlinks to different story elements, with further hyperlinks hidden behind the on-screen written narrative. Readers can therefore opt to follow a linear story by clicking on the forward arrows at the base of each screen, or they can choose a non-sequential order, accessing different storylines through the hyperlinks concealed in the images and words. Whilst to some extent, this flexibility resembles the choices that have always been available to readers by flicking through a book or reading the end first, the multi-modal experiencing of sounds, colour changes, images and words combine to create a fundamentally new kind of literary experience.

Interactive narratives such as these foreshadow the future development of cyberspace literature for children. However, the extent of the choices available is limited by the imagination and skill of authors and software writers, and on their perceptions of readers' likely capabilities. One imaginative and visually witty venture into the affordances of on-line modes that readers of this chapter might enjoy is Peter Howard's online *Sub-atomic and particle poetry*[11] which considers the relationship between poetry and particle physics. Howard's combinations of written and spoken words, visual innuendo and movement are best viewed, rather than explained.

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[9] Each new line represents a new screen shot, with dark background, and white, ghostly lettering appearing as the narrator reads.

[10] http://www.eastgate.com/LastingImage/Welcome.html

[11] http://www.wordcircuits.com/gallery/subatomic/index.html

The future for children's literature?

Contemporary authors of children's literature are beginning to respond to the affordances of new writing technologies, but their full potential has not yet been fully tapped into. Reynolds (2007) suggests this reticence to experiment with new narrative forms for children links not only to aesthetics, but also to current cultural perceptions of childhood as a time where literary conventions should be learnt, and where reassuring stability is needed to maintain social coherence.

This chapter has considered how the diversification and multimodal affordances of new media are influencing the kinds of literary texts children experience, and are creating ways of engaging with texts that go beyond traditional understandings of what 'reading' and 'narrative' are. Inevitably, new themes are emerging in traditional, printed fiction that reflect multi-media popular culture and new forms of e-social networking. New media are also introducing new social contexts for literature, and are changing the social practices that young children experience around literary texts. Communication technologies are bringing about a convergence of what previously have been considered distinct social realms, such as home/ school, entertainment/ information, education/ leisure. Rather than reading by torchlight under the covers alone in their room at night, many children in the 21st century are sitting in front of a webcam, talking on-line, constructing multi-authored narratives with their school friends, and in school are metamorphosing classic book stories in new media representations.

So what will the future hold for children's literature? Interactive digital texts offer the potential fundamentally to change the ways narratives are structured, blurring the boundaries between 'author' and 'reader', as 'readers' can be selective in the structuring of a range of narrative options, and MUDs open a new door for multiple authorship. Hyper-narratives can be non-linear, they need not be predominantly text or graphics-based and can incorporate diverse modes and media. E-literature readers can choose which media they experience a story in – single or multiple users can have the power to control how a story unfolds. However, all such developments are limited by the imagination, skill and expectations of their creators, and many current digital narratives lack the kinds of integrity and aesthetic pleasure that older generations associate with reading. Whilst at the beginning of the 21st century we are witnessing the development of radically new narrative potentials, we remain constrained by cultural expectations of what narrative is and by the affordances of technological invention. In the near future, hand-held, voice receptive mobile devices may begin to tell us local stories through satellite navigation devices as we walk or drive around a city. It seems inevitable that future generations of readers born into a digitally negotiated 21st century world will develop an intuitive understanding of digital narratives, and will begin to tell new stories in new ways that neither we nor the Oompa Loompas can even begin to imagine.

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VIGNETTE 1: MULTIPLE MODES IN ON-SCREEN NARRATIVE

Jamie is four years old, and enjoys playing with a computer adaptation of the popular young children's television programme 'In the Night Garden'. This could be described as an on-line interpretation of a traditional illustrated story book, featuring a group of characters who live in a woodland glade. The characters are stylized, each a different shape and size. Their images are sometimes superimposed on film of a real wood, and sometimes set against drawn images of a wood. The wood has different seasons, and night and day. The characters 'talk' in an unintelligible language which has pitch and rhythm but no identifiable words. Each has its own unique characteristics, its own 'tune', and symbolic possessions that reflect its interests and pastimes (see http://www.inthenightgarden.co.uk).

It is late in the afternoon. Jamie is tired after his preschool session and is now at home exploring the already familiar In the Night Garden site alone while his mother is preparing tea. On the homepage, Jamie can choose between the gently shifting icons of 'Sleep time activities' (represented by words and a flower icon), or 'Awake time activities' (represented by words and the outline of a character). He hesitates, and while he is choosing, a squeaky, highly decorated Zeppelin (Pinky Ponk) flies slowly across the top of the screen. He clicks on the sleep time icon for story, and a new screen appears with four icons to choose from, set in an illustrated background: 'See the characters go to sleep'; 'Bedtime story pdf'; 'Animated storytime book' and 'Bedroom door sign printable'. He clicks on the latter, looks at the static image that appears, clicks to close it, then selects the icon for an animated story. The screen changes to an image of a carousel set in a cartoon wood. A 'start' icon appears in red, and wavers in the bottom right corner. Jamie clicks on it. Petals fall and the screen changes again to a close up of the carousel, with a shifting icon 'spin the gazebo'.

Jamie's mother comes back into the room: 'Which story would you like?', she asks. Jamie glances up to his mother momentarily, clicks on the 'stop' icon as the carousel shows his favourite character, Igglepiggle - a cuddly, shy, bouncy blue teddy. Two more icons appear: 'Watch story' and 'Spin again'. Jamie hesitates and studies the screen. Silently, his mother points to 'Watch story', and he clicks on this icon.

The story takes a few seconds to load, then opens with an image of Igglepiggle sitting on the ground, with flowers spinning around him. Jamie's mother begins to read aloud the instruction that appears in a speech bubble 'Click on the spinning flowers to hear the characters', but Jamie clicks before she reaches the end of the sentence – he already knows its meaning. A narrator's voice begins to tell the story, and each narrated sentence appears in printed writing at the base of the image. Sounds and musical jingles accompany the narrator's voice, and the on-screen characters perform the actions that are being narrated. Once the narrator has finished, petals fall, filling the screen, then the screen clears and a new scene appears. Jamie clicks on each new screen to make the narration continue, telling a story of a little journey Igglepiggle makes with some of his possessions. Jamie's mother goes back to the kitchen to set the table while Jamie watches, listens to and navigates his way through the story, seeming particularly animated at times, and leaning forwards as though to touch some items as they appear on screen. The narrator sometimes asks questions: 'Whose house is that?'; 'Are they in or are they out?' Jamie does not respond, but is prompted by these questions to click on the symbol for the story to continue.

When the story is over after a few minutes, his mother, who has been able to hear the progress of the story from the adjoining room, calls Jamie through for his tea.

VIGNETTE 2: ENJOYING AN INTERACTIVE PICTURE BOOK

Michael is three years old, and has just finished eating dinner with his family. He leaves the table to fetch an illustrated 'Bob the Builder' book and his 'Bob the Builder' doll. He settles back at the table next to his mother and asks her if she will read the book with him. This is a precious time of day for both of them in a single-parent family, when the working mother dedicates time to her youngest child to play a game or read together while Michael's four older siblings do their homework. The book on its own can be read as a story about Bob's day at work, which includes number counting, or it can become interactive through the doll. Here, 'reading' involves finding number symbols in the book and corresponding numbers on the doll, then pressing buttons that activate audio chips on the doll 'Bob', who narrates a page of the story as each button is pressed.

Michael presses a button at random on Bob, and Bob begins to speak. The mother watches her son, then turns her gaze from Michael, opens the first page in the book and glances back to Bob as she explains: 'Look first you've got to find number one, which is number one?' Michael follows her gaze direction from the '1' symbol in the book, to Bob and back to the book, studies the book page and then points to No. 1 on Bob's shirt. His mother confirms his actions are correct: 'Right number one this is number one' and presses hard on the corresponding button on Bob. Bob speaks: 'Hello I'm Bob the Builder I'm wearing my hard hat and tool belt full of tools ready for work'. Michael places his finger on the No.1 button, but before he has time to press it, his mother instructs him: 'That's it, now turn the page'. Michael hesitates, and the mother gently turns the page: 'Now you have to find that one', as she points to number 2 on the second page. Michael asserts his right to control the activity as he turns his gaze from the book to his mother: 'Let me do it'. He studies the book for a few seconds, then turns his gaze to Bob. 'This one' his mother encourages, pointing towards a number 2 on Bob. Michael presses, there is the sound of a telephone ringing and Bob answers: 'Hello Bob the Builder's yard…' he

begins, and he goes on to name all the tools he will need to fix the job he is being called about. Michael's mother points to the illustrations of the items as they are named. When Bob has finished speaking, she says: 'Right now we find number three'. They continue the reading, enjoying the book together as Michael becomes increasingly confident with the procedure of finding number symbols on the page and then on Bob, pressing them and listening to the next installment of the story.

Figure 1: CBeebies interactive cartoon story

Figure 2: On-line horror stories in 'The Nightmare Room'