

DEVELOPING STORY-TIME: THE IMPORTANCE OF INTERACTIVITY IN ENCOURAGING CHILDHOOD READING

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ABSTRACT

The rise of electronic publishing has seen the birth of new forms for content. Popular novels are already beginning to find a comfortable home with dedicated e-book devices, where the technology is suited to representing textual content in a comfortable way. However, with highly illustrated (and often interactive) children's books a new interface is needed. Not only in terms of dynamic input and display technologies, but in terms of that interaction that defines the way in which children read. The information age may see the creation of books in variable formats, with the intention of recreating the immersive nature of story-time.

Currently, with the impact (and penetration) of smart-phones (and recently tablet computers), new electronic reading platforms are increasingly being made available on the new idea of software as applications. This allows for the development of books not simply as visual and textual entities, but as operable tools which need not be limited to the idea of rich iPad applications. Titles can be adapted for Java-compliant mobile phones as well as via simple text systems. The idea should not be to create superb software, but rather stories that involve the young reader as much as a game would. By integrating the interactive nature of modern technologies with the story of the book, the reading experience can become more involving. It is through such efforts that children may be nurtured towards literacy, while staying in touch with technological advancements.

KEYWORDS

E-books, children's literature, interactivity, enhanced e-books, media applications, story-telling

1 INTRODUCTION

In today's modern age, when people's tasks are being defined by the technology they use, technology has become the verb – type, phone, tweet, Google, e-mail, blog – and as such, it is only natural that children will come to embrace more technology as they develop. The “reader” can already refer to a piece of equipment, and the time may come when reading specifically refers to that hardware interaction.

While an “all digital” book-reading future is still too far away, the technologies that allow for it already exist, and both publishers and the public are facing uncertainty regarding the future of the book industry. As such, numerous publishers are now experimenting with electronic publishing, whether within their own enterprises or through outsourcing to new service providers.¹

But, when looking at children's literature, what are publishers trying to achieve? The modern child can already be provided with various books on a range of topics and at various reading levels – as well as computer programmes for fun as well as education. As computers become smaller and more portable – which for the foreseeable future will be in the form of tablets and smart-phones – it is more than likely that many children will gravitate towards them as operational and reading tools. Publishers of children's books should be wary of simply pushing potentially distracting media content in the way of the text in order to keep the text interesting. Rather, to stay true to the idea of books, somehow they need to present text creatively, with multimedia content that is subjective and supplementary.

This has been done in books before, and creating a book with pictures, puzzles, variable plots (as seen in game and adventure books) and even mechanical features (in the form of pop-up, or paper-engineered, books) is no new or hard task; nor is the idea of creating a book which the reader is required to interact with physically. This article represents the first step in on-going research to ascertain the importance of an interactive narrative in literature intended for early childhood reading (ages ten and below) as was presented at the IBBY Africa 2011 conference in Polokwane.

2 READING AS WE KNOW IT

For an adult, leisure reading is a portable portal away from everyday stresses. It can be relaxing, yet equally invigorating and all-consuming. Having gained a competent level of literacy, all readers need do is let the words sink into their minds, and allow their imaginations to do the rest. But why is this not the same with children?

Some children start reading from a young age and never stop; but it is also true that some children would rather be playing their PlayStation™ or some other device. The fact is that certain interactions are more intuitive than others. Reading is a learned technique, and is only available through the channels of sight, sound and repetition. For children to

become engaged in reading, adults are required to demonstrate what reading should be like (Gallas 1999:87–88).²

How do adults make texts accessible to children? They tell stories by making sound-effects and acting out characters to create universes. They check comprehension by asking questions, and answer any that come in the other way. Entertainment aside, there is a need to keep young listeners interested – through visual and verbal actions reading becomes an inclusive activity. This is the natural method, and without it, the idea of reading to the “uninitiated” is simply dull (Gallas 1999). Until such a time that children can learn to create their own worlds within the confines of a given piece of literature – forming a sort of imaginative fusion – it is the responsibility of caregivers and educators to facilitate that genesis. Reading is only an obstacle so long as the text as indecipherable and inaccessible. In the early stages it is crucial to develop the necessary skills, as has been done for generations.

2.1 WHAT HAS CHANGED?

In an increasingly multimedia environment, while children are still learning to read, reading for enjoyment must compete with television and other media. While children’s literature is still a strong field, with books being published that cover all manner of plots and purposes, there are two types of books which are easily supplanted (largely due to production costs) by modern technology, namely: the game-book – which provides the reader with a variable narrative – and the pop-up book. The proliferation of computer technology has enabled a host of digital material to be developed which serves the same purpose. Game-books have become computer games, and pop-up books are seeing a resurrection on tablet devices as multimedia enhanced applications. To tackle the world of multimedia and conventional reading effectively, it seems that publishers will have to take to fighting “in the iShade”. The development of Apple’s tablet has created a benchmark and publishers’ task is to satisfy demand, while testing the waters to find out what the elusive perfect e-book is and how to make it readable for children.

However, it is important to keep in mind that children – no matter how much they may protest the fact – do want to learn, and want to prove what they have learned even more. With new developments in electronic reading, it seems that a new era in education is approaching, as Edward Nawotka (2011) notes: “Non-linear app ‘reading’ is perhaps more analogous to how we really learn than reading a straight narrative.” This is further supported by Eliza Dresang (2008) who argues that for children “their natural way of approaching [reading and writing] is ‘hypertextually’”.

While modern children are exposed, to a large degree, to a multimedia-enriched environment (Smith 2010:2–3), and the lure of other activities is strong, when these features are incorporated into books they “address the full spectrum of comprehension: auditory, visual, and kinaesthetic/tactile” (Hazelwood 2011). Interactive literature allows children to take a character and embark on an adventure where they are confronted

with numerous challenges, which they themselves must overcome. Once they have been shown how to do it, any interactive activity can equal another – in terms of engrossment at least.

Interactive literature can provide child readers with an experience similar to gaming, but unique in its own way. In a similar way to games, interactive literature allows for an immersive experience where the reader is concerned with the self, rather than the “other”. What is experienced applies to the character directly through the reader, and for children’s literature – especially that which aims to teach some kind of moral – the message is direct. As such, the applicability of interactive children’s fiction is not just for language learning, but for truly comprehending a text through role-play. This is because, in a story, characters may not always perform actions according to their personality, but rather – as they are plot devices – have characteristics which exist to justify their actions; however, when readers are involved – and depending on the degree of intended immersion and control – they can adopt these characteristics temporarily to see the actions from that point of view, or adjust the experience to suit their characteristics. “For formalist and structuralist theories of narrative a character is defined not by his or her psychological traits, physical features, social status or even gender, but [...] by what he or she does and his or her role in the story in which they participate” (Simons 2007).

3 PRIOR TECHNOLOGY

Before in the arrival of the electronic age, people’s interaction with information products was completely physical (or mechanical for that matter). Information could be provided on paper and that paper could be prepared with a little design and glue to create any number of processes, from compartmentalised Christmas calendars to books with moveable parts, pop-up books, and interactive literature (including role-playing game-books). Even some colouring books can fall into this category, where readers are involved in the construction of the world through their omnipotent crayons.

While not the mainstream format of the children’s book industry, these books do occupy a particularly nostalgic place in adults’ minds, but are naturally limited by their production costs and their audience. Once children reach the stage where they can truly enjoy a role-playing game, they are more likely to turn to a computer, rather than paging back and forth and pencilling in scores on the character page (as prior role-playing game books required). At a younger age (and with less specialised production) simpler game picture-books presenting the reader with tasks (such as tracing the correct vine down a cliff, or choosing whether to go to the volcano or into the forest, again), are a common and memorable genre.

The personal computer can largely over-power the need for such books however, and current projected future trends are for a move towards mobile devices. Electronic media allow for greater versatility with more levels of intricate interaction, without having to

look towards specialist printing. But, electronic media need not be the enemy of print. As the idea of e-reading becomes more prominent, it is fully plausible to create an e-book which is able to recreate the feel of a book, while embracing new technology.

4 MAKING THE MOST OF THE TECHNOLOGY

Like most technological revolutions, the technology is in existence, but until a major manufacturer takes it up and popularises it, nothing is seen of it. The change in modern times has come about as a result of the change in distribution. During the 1990s, when technology was migrating over to CD-ROMs, along with the development of graphical operating systems, people were being exposed to the idea of interactive ways of learning. One of the biggest leaps came in the form of Microsoft Encarta (1993); while the encyclopaedia retained its topic- and text-based structure, it was able to enhance the content by providing extra image, video, and interactive content, as well as a non-linear structure. This evolutionary format was poised to continue as users grew accustomed to on-screen reading thanks to the development of office software, but digital distribution changed.

While the Internet did not pose much of a threat to software in its early days, with the advent of broadband lines and wireless access, the age of the disc is dying. While it is still a primary means of delivery for large amounts of data (such as software and high-resolution video), support material exists mostly in electronic form (accessible via the web) and where broadband has truly permeated a society, a disc-less generation is evolving. However, in South Africa, it is evolving faster than the medium can keep up. Outside of the highly-developed world (those countries with deep broadband infrastructure and penetration), the Internet is an insufficient medium for distributing high-quality multimedia content. Although the enhanced e-books being created for modern tablets will find their way to South African shores, they may not become mainstream so long as the price and infrastructure barriers remain up and limit fast Internet access to more affluent areas of society.

5 ISSUES OF DIGITAL READING

The question of enjoying e-books is always accompanied by several problems. Apart from individual preferences for the tactile experience of reading printed books, as well as numerous arguments about copyright ownership, the biggest issue is often that of the screen. While people may be growing more comfortable with reading from electronic screens, e-book reading has only truly become a mainstream option since the adoption of E-Ink thanks to the popular Amazon Kindle™. This e-reader has two powerful features, namely: Whispernet which operates in conjunction with the Amazon database, and its

E-Ink screen. Numerous studies have shown that, in general, reading habits increase with a comfortable screen and with a dedicated device (Fowler & Baca 2010; Maynard 2010; Pattuelli & Rabina 2010). And as such, comfortable, prolonged e-reading is really only possible with the new display technologies (some of which are in the pipeline already, with Pixel Qi and Mirasol being interesting examples).

However, it is likely that people will be letting go of the current displays any time soon, and somehow they are forcing themselves to adapt to a more screen-represented reality. For children growing up with mobile communication, they have no problem messaging and reading for hours on MXit or BlackBerry Messenger (BBM). By a similar token, computer games and computer-viewed television and films are continuing to help people adapt to a life of instant computer-based entertainment. On-screen text naturally presents issues, as is continually argued in the numerous liquid crystal display (LCD) versus E-Ink debates, where backlit displays are generally agreed to cause eye-strain. But, again it has to be said that people will find a way to put up with it. On-screen textual pages which are divided by images and inter-linked into independent units, give users access to e-newspapers or whatever else they may be interested in. Therefore, how is reading on a mobile device any different? Small amounts of text are presented at a time, and users request each new piece, choosing which story to follow.

During story-time, the process is the same: the reader reads for the child, controlling the pace, giving small chunks, and prompting responses. When the reading process is interactive, somehow it becomes more inviting and more engaging. At a stage when children are trying to learn the task of reading, it makes sense for adult readers to encourage reading as an activity, demonstrating the type of excitement and enjoyment they would produce with their imagination – in silence (DeBruin-Parecki 2009:386).

Therefore, when modern children reach for their cell-phone, laptop, or tablet to ease their boredom, it is possible to make that an opportunity for reading, by giving the young reader a book which prompts reading and interaction. Is it possible to produce a book which asks to go on, a book which, like a story-teller, can convey tone, timing and energy by presenting the text in a new way?

6 WHICH TECHNOLOGIES ADDRESS INTERACTIVE READING?

The idea behind interactive reading is not new, with numerous adventure books for children having been published throughout the twentieth century. In the age of computer interaction, however, a middle ground needs to be found where readers can enjoy the various benefits of the technology from which they are reading, while still perceiving what they are reading as a book.

Already some textbooks are applying this in the paper realm by giving references to links for further reading, or visual examples, or addressing smart-phone readers by placing two-dimensional quick response (QR) codes within the text. This effort, however, forces readers to abandon reading, and switch on their computer or phone. In order to create a seamless reading experience, e-books should be defined as independent textual entities which can be operated completely through one device.

Currently, the idea of presenting e-books as applications, or apps, on tablet computers (most notably the Apple iPad) is receiving a great deal of attention. With these apps, e-books can be made as pieces of software operating within the framework of the device, created through focused multimedia languages such as Adobe Flash and Air, SMP, Objective C, or through any other supported programming languages. All these devices bring about the most immersive experience, as the hardware can be held close and the interaction can be touch-based and intuitive – and, where the interface is well designed, common problems with on-screen reading can be overcome (Dillon 1992). The downside of such hardware is its own seemingly endless capability. Hence, it is difficult to just make a book, and the temptation is to load the book with so many superfluous features that it effectively functions purely as a platform for its games or other extra content. The successful e-readers are good at being just that, readers (Shatzkin 2010).

For simpler mobile devices, or for reading via a web browser with lower bandwidth requirements, existing scripting languages such as Java or PHP do much to allow for a powerful and easy-to-use platform. Furthermore, many mobile phones support apps written in Java, and as such, the platform is ready and waiting for use. It is a familiar technology, and it is a simple process to input text for short commands.

However, it is possible simply to write with HyperText Markup Language (HTML), creating a visual page which allows for inter-linking, pictures, and malleable text. This is already being used as part of the ePub standard, and as such means that a new platform does not have to be developed. Furthermore, HTML is a well-supported *book* format, and so is ideal for mobile publishing purposes.

Finally, for readers with limited access to technology, there is the use of Unstructured Supplementary Service Data (USSD), with which people are already familiar for checking their airtime balances. This represents a simple text-based interface for poorer communities, which can be made instantly available (i.e. no long download time required). The medium does, however, limit the reading experience to two-minute sessions.

All in all, in the increasingly mobile-fuelled world where reading is starting to show signs of “going digital”, whatever the device may be, it is already possible to start presenting stories in a way which is suitable to reader interaction.

7 HOW WOULD AN IMMERSIVE STORY WORK?

The premise for such a story is simple. When reading is being learnt, and an adult is present, the process is not pure reading, but closer to story-telling. The teaching adult in the scenario fulfils a number of roles, from being the primary reader of the text – performing all of the interpretive functions for character, timing, suspense and so forth – to being a facilitator for comprehension. This person is required to ask questions: “Do you think Sam did the right thing?”; “What would you have done?”; or “What will Katlego do now?” The reader naturally poses such questions to elicit responses and encourage the child to be involved in the story. This task teaches the child how to interpret the written word in his/her own imagination, as naturally it takes some time before the child is able to read comfortably using nothing but his/her own knowledge and imagination. As such, if a child is put in a position where there is no reader available to read, the next best thing would be to give the child a book that fulfils the same functions.

An immersive story would have to be based on this dialogical approach (DeBruin-Parecki 2009:386; Mol, Bus & De Jong 2009:980). While for some stories it may be fitting to start right away with “Once upon a time . . .”, a story can also begin with “Have you ever had your feelings hurt?” This is a step worth considering as it allows the context to be set, and encourages the child to start focusing on a particular issue and to prompt interaction. As such, while the classic linear story-line will exist, a truly immersive story must give the child room to interrupt and consider the scenario. Therefore, the e-book would have to be created with in-built questions for the child reader, which in fact makes it easier for non-linear story-telling to take place. For example, when the tale requires the reader to try and figure out what has happened, or why something happened, the reader can be given room to speculate, in a story created with a series of variables, through which it is possible to realise all the possible outcomes. This allows the reader to ask, “Why?” and allows the book to answer.

Furthermore, whatever shape the story takes to keep the reader interested, it is important to consider allowing the reader to influence the story. Such interactive ideas have been tried in adult interactive, computer-based fiction,³ or e-books, where the story becomes more of a game where, in order for the action to continue, the reader is required to dictate the action. Thus, incorporating choice into the plot which can increase the re-read value of the title (Hoffman 1993:501). Naturally, some stories will want to preserve their form, and the continuity of a tale is an important feature in ensuring its longevity. Especially at a time when children are exposed to games and other interactive mobile devices, allowing the child-reader to fully control the flow of the plot of a book can have important implications. For example, it could link the idea of reading on electronic devices, and the idea of immersive activity with reading, prompting a positive association with the activity of reading, before they move on to “big books”.

Jesper Juul (2001) argues that “you cannot have interactivity and narration at the same time”. His argument is based on the idea that when reading a story, the narration-time and the reading-time are separate, but at the moment of interaction they must merge, thus placing the reader in real-time, making it impossible to have events such as flashbacks. However, it is always possible when the reader is the protagonist, that the flashback can be malleable according to the reader’s own “memories”, thus affecting the plot in the same way other choices would. As will be discussed below, interaction can exist either as part of the plot, or as an opinion outside of the plot.

8 HOW COULD THIS BE PRESENTED?

There are various ways in which a story can be made immersive. For material that is not intended to be written with variable story-lines (which applies to most existing children’s literature) a lot can rely on the role of the adult reader involved who interprets the voices and tones of the story and the characters (if they exist). There can be a different story-teller function, in which the role of the story-teller is to present options to the reader by forcing the child to respond, by asking for opinions, choices, or alternative options. As such, readers will reach a point in the narrative where, before they can go further, the narrator asks: “What would you in this situation?” The story is immersive in its ability to prompt readers to consider what they are reading, and dwell on the subject at hand. As such, this type of story has larger implications for educational/edutaining content, where a specific message needs to be conveyed, and has been shown to improve knowledge and language acquisition (Gallas 1999:92; Mol, Bus & De Jong 2009:992).

Publishers need to be wary of the above point, however. Interrupting the narrative may have a natural feel at times, but it can also be a hindrance. There will be times when the child will need to simply “get on” and enjoy the content. Therefore, it is likely that certain conditions would need to be imposed in such narrator-content so as to make the interactivity: (1) as naturally akin to a listening-reader to storyteller relationship as possible; (2) not be seen as an obstacle but as part of the experience; (3) variable per experience (within reason); and (4) bypassable.

These, however, would all be addressed through careful scripting. The first two points are a matter of realism and representative of a natural storytelling experience, as Marie Redmond and Niall Sweeney (1995:95) point out: “Two distinct styles of writing are required for the spoken and written word. The selection of words and the elimination of unnecessary phrases is vital in scripts that will be heard rather than read.” Even when presented through text, the function is to replicate the role of the speaking story-teller. The third point requires multiple versions of this narration to exist, and for multiple responses to be accepted. While these need be limited according to the scope and context of the story, there needs to be a suitable variety, as while the reader may come to expect certain questions and situations, nothing makes a story better than surprises, and the narrator needs to challenge the reader on multiple levels through the different

readings. As for point four, it is sometimes the greater challenge for the readers to read by themselves. Modern ideas of enhanced e-books for children are already using this and offer a variety of modes, such as: the books are read aloud; the reader reads alone; or the reader engages in book-related activities (Piccione 2010; Rochester 2011; Williams 2011). It is important to give readers the option of reading by themselves in the same way they would after someone has read a book to them. To encourage the use of the “enhanced narration” (if you will), a publisher may wish to mandate it for a first-read – after which other modes are made available. However, the question is, what is the likelihood of the young reader wanting to explore all the features? Being a new feature, further research still needs to be done to see how young readers react to these books.

A second possible model for presenting the books would be books that are intended to be interactive from the start. Again, such books were developed in print form during the twentieth century – examples including the *Goosebumps* and *Choose your own adventure* series of books – though they naturally face stiff competition from the draw of computer-based entertainment. Despite the difference in medium, interactive storybooks still accomplish the same function in that they can place readers in the centre of the action – whether they are the protagonist or whether they assume another defined role – where they are able to shape the story according to their actions.

Following previous models, during the course of the story the reader is presented with certain objectives and is required to make choices (each of which will shape how the story progresses). How this is presented will be based on the intended reader and the choice of the author/publisher. It can be highly text-based for more advanced readers, but also contain numerous pictures, or even largely be a picture book, all of which depends on the chosen device.

In order to remain a book and encourage further reading, the core narrative should be presented through text with any visual material supplementing it. On a digital platform each “page” will allow for a continuation of the narrative or for a challenge in the form of a question or task. The original game-book model can be followed with preset choices leading to alternate pages (easily accomplishable through hyperlinks), or through the use of images in which the solutions are hidden within the visual information, requiring the reader to, for example, trace out a path, pull back a leaf, or make out text hidden in a small shape.

However, it is also worth noting that the book can be presented in fluid forms, and take something from the world of games. While the appearance of a book should be maintained to some degree, sections can be designed to accept textual input and images and can adapt to feedback by providing speech bubbles and extra pieces of the narrative in the form of textual excerpts. By providing task feedback in real-time, the interaction can be made integral to the narrative and not distracting games/features in themselves (Redmond & Sweeney 1995:90). It is worthwhile here to point out new narrative ideas as presented through books such as Milorad Pavic’s *Dictionary of the Khazars* (1984)

in which the reader is presented with a fictional reference work, and through the cross-references in the entries is able to work out a story. While this may be too advanced a system for younger readers, the idea of coming up with a story to match characters is not new for child readers, who are used to creating characters and stories to match circumstances (toy companies thrive off this) (Murray 1997). “As in reading books and listening to radio, the player uses imaginations to fill out the rest of the action, yet the static image and the structure of the game play scaffold his or her situational model” (Smith 2010:4).

As in computer games, an interactive story should still be able to function (if it is the publishing decision to do so) with the idea of the “labyrinth” (Smith 2010:135–137). As the story evolves and the reader becomes more immersed, the creation of a viable real-time puzzle, that forces the reader to act, becomes crucial in achieving full reading pleasure in this manner. It is best explained by Murray (1997:137) who notes: “There are two potential heroes in computer-based labyrinths, the protagonist and the reader.” While conventional fiction does use this to a large degree, only a character in the story (the protagonist) can be the hero. But when the world of the book is drawn into a narrative structure it becomes possible for the reader to be responsible for the events that occur; be it fighting a dragon, or finding mom’s keys, the reader is able to say at the end not only that he/she “finished it”, but that he/she “did it”. In order to ensure this, it is important the writing is done in such a way that “the [reader’s] choices seem natural and are almost transparent to the flow of the narrative” (Redmond & Sweeney 1995:90).

9 THE EDUCATIONAL BENEFITS

Where this approach to publishing becomes truly useful is in its educational function. While the scope of this article does not address textbooks directly, the promise that interactivity holds for increasing learning potential is great. Children’s books perform numerous societal functions – from education to socialisation, and entertainment to language development. Especially at an older age (late pre-school), children respond well to interactive reading in the classroom, with the assistance of a teacher. Furthermore, it has been seen to be an incentive to read further (Mol, Bus & De Jong 2009:992–1000). Therefore, the place of such books is in the stages when children are beginning to read by themselves and need something which is enthralling as a text, but also offers a familiar experience (albeit a solitary one). As such, the development of these books would be a step for the cause of literacy. Interactive literature can move towards interactive literature in general, and address other forms of literacy (including computer and visual literacy). Interactive literature fulfils a useful place in the literature world by corresponding to Roland Barthes’ notion of “writerly text” and so can lead to the narrative being more involving (Dresang 2008). “One relatively subversive thought is that in schools, where some of the new media most favoured by youth are not allowed ... [we lose out on capitalising children’s] DigitalAge characteristics” (Dresang 2008).

Therefore, from an educational standpoint, the use of interactive literature can be beneficial in helping children to draw on their new knowledge skills with new media and technology.

In South Africa, there are currently over 10.3 million active browsers (Charton 2011), which means that there is a mixed-race group (Statistics South Africa 2011:3) of technologically competent readers. As such, whatever method they may be using to connect, a fifth of the population is reading digitally, and it is only a short time before portable devices become more locally ubiquitous. While as yet the majority of the local market may not be ready to make the step towards interactive fiction, the time is coming when it may be a welcome tool, and those readers already reading actively on mobile devices can begin to benefit from it, at home, now.

10 AMONG TEENAGERS

Local projects have already taken place where the desire for interactivity has been shown. Steven Vosloo (with a sponsorship from the Shuttleworth Foundation) began the m4Lit (mobile phones for literacy) campaign in September 2009 by publishing the mobile novel *Kontax*. This was published through the mobile service MXit, and as of January 2011 had been read 9 000 times (Yoza Project 2011).

The now-called Yoza Project seeks to continue publishing in this manner, under the expectation that the cellular phone is e-reader for Africa. While a large number of reads were prompted by the novelty factor, reviews of the actual novel and the process were positive. Readers were able to become involved in the story by discussing the events in the story as well as offering plot suggestions through MXit. Apart from asking for more stories in more languages, the feedback has asked for greater interactivity, allowing readers to shift the path of the story (Yoza Project 2010). This platform is aimed at teenage readers, but has shown nonetheless that the new generation is moving towards the idea of mobile reading, and that interactivity has a big part to play.

The project now has a dedicated mobi site (yoza.mobi) and has 32 stories available for reading. Though currently the publishing project is on hold and its future seems uncertain, perhaps with a strong marketing campaign there will be a resurgence of interest. This new field provides a much needed practical demonstration of how stories can be presented through a cellular environment.

11 CONCLUSION

This article was inspired by seeing children reaching for their parents' cellphones when they were bored at a wedding. Rather than bring a book or a toy along, they just asked for the phones. Such an act showed quintessentially how comfortable modern children are around technology (Short 2010:39). While in the not too recent past the computer was a

tool “for grown-ups”, today children are expected to use it throughout their school and future careers. When it comes to using non-linear books, according to Dresang (2008), “given a choice, many children will select the books that emulate their preferences in dynamic media and that, despite its less linear and often more sophisticated presentation, they can and do comprehend what is presented”. As computing technology continues to shrink and become more ubiquitous, there can be little doubt that people will continue to rely on smaller and more powerful devices to do more tasks as time progresses. Arguments may continue over the future of the printed book, but so far they seem to be holding out, and new technologies need not be an adversary. Smith (2010:2–3) notes:

Reading during childhood and adolescence is becoming more difficult as increased exposure to other media which interprets the visuals for them has dampened some of the ability needed to actively visualise what occurs in books. Reading as an act is a difficult mental exercise, requiring much from the visual processors of the brain to both interpret the symbols on the page, and secondly create a mental picture.

Therefore, the need for a bridge between the new and old media is becoming increasingly important.

At a young age, people are quickly exposed to the world of the screen, and this world can complement the printed one in many ways. In the theory proposed here, if publishers can create a virtual book which encourages participation through an interactive narrative, they will not be detracting from the book experience, but rather allowing for a recreation of the story-time (and later game-book) environment through which the reading experience can be seen as a fun, solo, experience at an early age. Should readers wish to continue reading in this fashion, so be it, but my belief is that, more likely, there will be the same natural progression from assisted reading (story-time), to solo reading, to book-based reading for leisure.

NOTES

- 1 Examples include Random House’s collaboration with Ocean House Media and Touch Press, Pan MacMillan with Missing Ink Studios and Penguin with Dare.
- 2 This is best analogous to reading music. The child must be taught to associate the characters on the page with sounds and rhythms.
- 3 Examples include Zork, Adventure and books from Malinche Entertainment.

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