The Future of Children's Texts: Evaluating Book Apps as Multimodal Reading Experiences

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Abstract

This poster reports preliminary findings from a project that examines enhanced picture books for children ("book apps") as designed multimodal experiences. We expand Lewis' ecological approach to picture books, developing a new model for the evaluation of book apps. We report early efforts to identify the qualities of this emergent genre. Our poster elaborates on several tensions in the design of high-quality multimodal literature, and promises to inform the efforts of parents, librarians and teachers who use enhanced reading materials in the development of early literacy.

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1   Introduction

The introduction of new reading devices, including the Apple iPad, Amazon Kindle, Kobo Reader, and multitouch smartphones, is radically changing the way we consume text (Chiong, Ree & Takeuchi, 2012; Ellis & Blashki, 2004). The landscape of children's reading and early literacy development in particular is changing dramatically as many children share access to these new devices at home, school, and the library (al-Yaqout, 2011; Bird, 2011; Cooper, 2005; Druin, 2009; Smith, 2002). The emergence of the "book app" and enhanced e-books for children marks an important milestone in the way young children engage with stories. Enhanced e-books are electronic books that incorporate additional features to complement traditional picturebook elements, namely text and images, with audio, video, animation, and interactive games (Bird, 2011). These new components promise to engage children in new and exciting ways, but, when inappropriately used, they can also distract young minds and detract them from narrative comprehension. Children are engaging with e-reading technologies at an early age, yet we still know very little about the effects of e-reading and whether it supports or constrains the development of early literacy (Gasparini, 2012; Gutnick, Robb, Takeuchi & Kotler, 2010; Hinchliff, 2008; Shuler, Levine & Ree, 2012). Furthermore, research studies that support our understanding of how e-books fit into the ecology of children's literacy practices are few. By literacy ecologies, we mean the wider context of reading (the who, what, when and where) in children's lives, not just their ability to decode text.

This poster reports early findings from a project designed to fill the gap in our understanding of early literacy development in a context where digital reading is being incorporated in homes, schools and the workplace at a dramatic pace. It is critical to study emerging readers and their use of technology, as early childhood literacy can have significant effects on young people's developmental trajectories into adulthood. This three-phase study explores three ecological levels of e-reading (the textual, personal, and institutional) contributing to a holistic understanding of enhanced texts and how they fit into the literacy practices of youth ages 4-8 years of age. In the course of this project we address the following questions:

1. What is the emerging nature of the enhanced children's text?
2. How does e-reading fit into the literacy practices of early readers?
3. How does e-reading align with the broader aims and practices of institutional literacy development?

2   Theoretical Framework

Due to the novelty of storybook apps, little theoretical reflection has been applied to this emergent form of text. Our study is rooted in Lewis' ecological theory of the picture book, which places the reader at the centre of the reading experience, and acknowledges the interrelationship between visual and textual elements (Lewis, 2001). In Figure 1 we show a representation of Lewis' theory. While this seems rather simple on its face, the notion that the visual and textual elements of the story work together to make meaning of a picturebook was, and in some circles still is, a provocative suggestion. Our theoretically informed approach pushes further on this concept by bringing in the multimodal elements of contemporary picturebook apps, recognized that they are both designed narrative experiences and designed multimedia experiences.
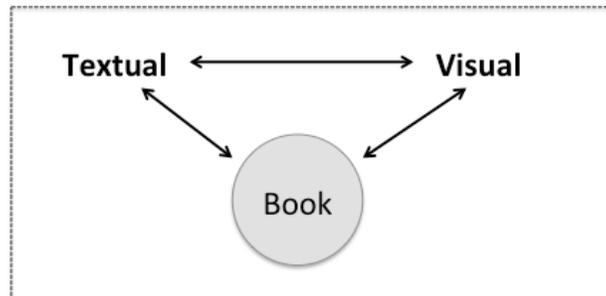

Figure 1: Lewis' Ecology of the Picturebook

The flexibility and complexity of e-books further leads us to examine this phenomenon not only using the ecological theory of multimodal books, but also the ecological theory of reading. Literacy is a practice that takes place in varied and complex contexts, involving interplay of space, time, resources, abilities and human values (Burgess, Hecht & Lonigan, 2002; Smeets, 2012) To date, studies of e-books for young children have focused on comprehension: whether reading e-books leads to better story recall or narrative understanding (Gasparini, 2012; Smeets, 2012; Vaala & Takeuchi, 2012). These studies involve children reading an e-book once, often in a sequestered fashion. The challenge in making recommendations from these studies is that these conditions poorly represent how children actually engage with texts, which often involves repetition, mediation, and playfulness.

3   Methods and Data Source

Our research project is addressing the research questions in three phases; each phase will tackle one of the questions. We are moving iteratively from the level of the book to the level of the reader to the level of the institution, toward greater ecological complexity with each phase. Our expanded framework is seen in Figure 2. We first created a database of over 200 reviewed book apps appropriate for readers ages 4-8 years. We then narrowed this list to 100 for our coding. A rubric coding scheme was devised and tested using a second randomly derived sample. We have completed the coding of these texts and preliminary findings are already emerging. The outputs of this phase will be both a scholarly analysis of the quality of enhanced picturebooks, as well as criteria to guide parents, teachers and librarians in the selection of enhanced texts.
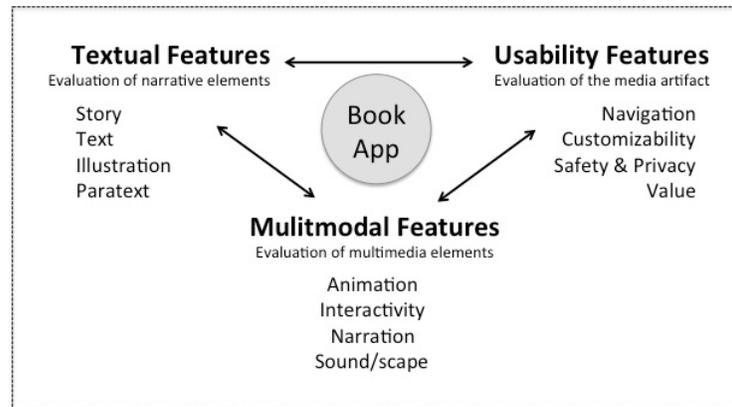
Figure 2: The Expanded Ecology of the Book App

4 Findings

Although we are still in the midst of our first phase analysis, several themes are emerging from our work, which we describe below:

4.1 The Challenge of Mulitmodal Evaluation Frameworks

Storybook apps are diverse in the features they use and how they use them. As a result, developing an evaluation scheme for use across a wide range of multimodal texts has been particularly challenging. Informing our selection of book apps were a number of review sources, including professional (e.g., *Kirkus, Horn Book, SLJ, Booklist*) and user-generated review media (e.g., *iTunes, iMum's blog, Digital Storytime, Commonsense Media*). A significant challenge to anyone selecting storybook apps is determining the reputability of these sources, since only a select few are connected to institutions that attest the quality of the reviews, e.g., *Booklist*, or *Horn Book*. Many sources concentrate their evaluation on the digital features present in book apps and pay little attention to the literary quality of the story. All of these factors make the selection of storybook apps particularly complicated. Our evaluation of review sources confirms that the variability in reviews can lead to confusion over quality: an e-book with excellent reviews for its literary merits in a professional review can be panned by parents if the app does not keep children engaged independently. We found that different values are evident in these reviews, and the different stakeholders (parents, teachers, librarians) can have widely different impressions of what a "good app" looks like.

4.2 Metafictive Multimodality

Apps can be "born digital", that is, created without a specific print precursor, such as Nosy Crow's *Cinderella* (2012), although based on a Grimm Fairy Tale, or they can be direct adaptations of a new or old text. *The Monster at the End of This Book* is one such adaptation. Based on John Stone's 1971 picturebook its narrative is built completely upon the notions of metafiction and self-referentiality; the reader's actions are what allow the narrative to unfold. Although remediated into an app, the story is constructed upon the conventions and gestures of the print book, exploring its materiality and investigating the performative act of manipulating the book as an artifact.

   Don't Let the Pigeon Run This App! (2012) is an app based on Mo Willems' *Don't Let the Pigeon Drive the Bus!* (2003). The picturebook and its sequels were already considered books with high levels of interactivity; the app version repeats the same formula, but adds a new level of participation, performance and co-authoring. Participation in this app is a metafictive device, promoting awareness of the story structure and template to readers. This app provides an example of high participation with very limited direct interaction with the touchscreen during the storytelling experience — an element that likens it in

certain extent more to an animation film rather than to a print book or to most storybook apps available. *Don't Let the Pigeon Run This App!* is an example of an app that, although migrating from the picturebook format, does not seem to remain attached to the print book format, exploring the features of digital media with more freedom, but also risking distancing itself quite substantially from the concept of a book, hybridizing with other forms of digital media.

4.3   The Important Role of Paratext

While we do not often think of paratextual elements as integral to the reading experience, in an app they can contain significant interactive elements. Paratexts are one aspect in the design of a book that has experienced significant changes in the remediation from print to screen. Front cover, full title page, half title page are often reduced to one screen where the title of the book is shown, and where, only occasionally, authors and publishers information are present. For example, The Melody Book's *A Jazzy Day* (2012) does not mention author, illustrator, and other professional that participate in the complex production of an app. The "info" page has, however, links to Facebook and Twitter, an element present in most storybook apps and that concerns parents and teachers, leading children to websites inappropriate for their ages. To overcome this problem, some developers, notably Nosy Crow Studios, created a barrier for children to access some of the paratexts. In *Cinderella* (2012) the credits, how to use information, and links to social media and to other apps are in a section called "For Grown-ups", which can only be accessed after following some simple guidelines presented in written text, blocking it from young children yet unable to read.

5   Conclusion

Our approach to book apps through an ecological approach expands existing notions of the picturebook and offers new ways of thinking about these media as interactive story experiences. At a time when technology is advancing faster than our understanding of its effects, we need richer approaches and deeper findings that explain how new media interact with our lived experience. This project is generating new scholarship on the way children read in the digital age and will inform parents, teachers, librarians and communities who mediate their literacy development.

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