

Children's Digital Booklist: Bridging a Divide in the International Children's Digital Library

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ABSTRACT

"International Children's Digital Library (ICDL)" is a research project to develop innovative software and a collection of books that specifically address the needs of new generation children as readers [5]. The collection consists of books mostly out of copyright protection, eliminating a huge number of current books from the ICDL that are still under copyright. However, their presence in the ICDL environment in some form is essential. Digital booklists can serve this purpose to certain extent. However, most of the children's digital booklists are created by adults and do not provide features and functionalities that offer enough information to enrich the digital booklist experience from a social standpoint and motivate children to use them.

Most of the research till date has been done on how to enhance DL's and how to design information and social spaces for adults. Not much research is done to explore how digital booklist can be designed for children as an information space that supports sociable environment for peer-to-peer knowledge exchange.

By collaborating with children as design partners and implementing principles of user-centered and participatory design [1,3], this research project discusses various ways to enhance user experience in an information space; by developing interest, awareness, motivation and trust, and encourage children (9-13 years old) to participate in social interactions, using ICDL's sociable booklist system. Furthermore, this paper discusses how architecture of such a system is designed along with prototype interfaces to provide engaging user experience.

Author Keywords

Children, digital libraries, user experience, participatory design, cooperative inquiry, contextual enquiry, design process, ethnography, information architecture, design partnership.

INTRODUCTION

According to Mark Prensky, "Today's students are no longer the people our educational system was designed to teach." He calls students of this generation "Digital

Natives" who also are "native speakers" of the digital language of computers, video games and the Internet [9,10].

Many schools use old traditional ways to educate students of new generation. In an effort to make children read books, schools provide booklists to students that are mostly created by schoolteachers or librarians. Most of the times these booklists are typed and printed on simple plain papers with categorized list of book titles. For children such booklists are just another piece of paper given by teachers like an assignment sheet. Even if the teachers or librarians add interesting books to the book lists, children are unable to visualize what those books are about, their look and feel as well as content of these books. These printed booklists do not provide effective graphics, random access to information or instant gratification, which can be frustrating. Thus, these printed book lists hardly motivate children to go to the libraries or bookstores and read books.

Majority children read books, as reading is mandatory in schools. Schoolteachers and librarians recommend books to their students by providing book lists and so children may feel pressured to read books that are listed in such book lists. They would not prefer to read books for fun. Instead, they would play video games or go on to Internet more often and gather information about their world rather than going to physical libraries or reading books. Internet has become new generation children's favorite choice since they can create, share, and research things, receive information instantaneously, perform multiple tasks simultaneously, gather information using multiple medias such as visuals, graphics, sound, etc. instead of simple text and also can view information randomly and dynamically.

With changing definitions of what it means to be literate in a modern society and with the changing attitudes of children, it is very important to study their psychology towards reading as well as their social interactions and behaviors in various environments. Multi-dimensional and multi-modal environments have changed children's preferences and reading styles. Thus it is very important to find new ways to fulfill their multi-modal online literacy needs and provide them with a user experience that will change their attitude towards booklists and reading.

INTERNATIONAL CHILDREN'S DIGITAL LIBRARY

In an effort to meet the needs of this new generation, a lot of research is being currently done on digital libraries and online reading environments that specifically target new generation.

“The International Children’s Digital Library” (ICDL) [5] which is unique from other digital libraries, is considered as the biggest online children’s library providing a wealth of valuable international children’s literature, but only old books that are out of copyrights or books whose copyrights ICDL has received from authors are digitized and added to the collection, whereas, contemporary books that are still under copyright protection are omitted from the ICDL. They are only available in printed format and are obtained in traditional libraries or in bookstores.

Though there are limitations for adding digitized contemporary books to the ICDL’s repository, it is important to design a system that provides information about popular contemporary books, award winning books, educational book or books that children of new generation are mostly interested in reading. Old books might not always be their preferred reading choice. ICDL contains books from all over the world for global access but it does not provide an environment for any kind of social interaction.

Since ICDL does not bridge the divide between historical and contemporary literature as well as the divide between static online reading environment and dynamic social reading environment, this project builds upon a research study to develop a digital booklist environment, which supports the ICDL in ways that will provide more current information about books, still under copyright protection, as well as offer a social environment for collaborative and social practices in multimodal form to fulfill their online literacy needs.

INFORMATION AND SOCIAL SPACES FOR COLLABORATIVE AND INDIVIDUAL PRACTICES

Levy and Marshall [8] visions rich access to a variety of materials in the DL’s, all of which can be used in an interpretive and collaborative manner by the community:

“We argue ... that the design of digital libraries must take into account a broader range of materials, technologies, and practices -- transient as well as permanent documents, fluid as well as fixed materials, paper as well as digital technologies, and collaborative as well as individual practices.” (p. 163) [8]

Such types of digital libraries can be called dynamic since the collections of any type of materials can be modified through user-initiated actions, and the environment provides a social space for collaborative and individual practices. In contrast, majority of current DLs can be called static, which are mainly repositories of conventional-media information, that permits browsing, searching and retrieval of

information and so users’ experience in DLs is passive and less engaging compared to the Web. Furthermore, many DLs remove social exchange and interaction, focusing narrowly on the technical mechanisms of information access.

Most of the research till date is been done on how to enhance DL’s and how to design social spaces for adults. Not much research is done on how digital booklists can be designed for children to form engaging social environments that support DL’s. Thus working with the Intergenerational Design team [4,7] of children 9-14 years old and adults together as design partners and using the cooperative enquiry methodology [1,2] developed at the Human Computer Interaction lab (HCIL) at the University of Maryland (UM) [6], this project aims to study and extend prior research on various social aspects of children, such as:

- Reading and writing behaviors
- What tools and features they use while reading and writing online
- What, when, why, how do children collaborate with peers?
- How children express their thoughts and exchange knowledge with their peers
- Use of multimedia in online social environments

This research project also aims to study various information and social needs of children. It addresses issues such as:

- What are various types of children’s information needs and how do information-seeking behaviors of children (users) vary according to their information needs?
- Why is it important to know about these needs and behaviors in cyberspace while designing architecture of information space that support sociable environments for children?
- Why is Information Architecture important while creating children centered designs and how it helps organize their information space in cyberspace.
- What methodologies can be used to create Children centered Information Architecture of an online sociable environment?

ICDL’S SOCIABLE BOOKLIST SYSTEM

Digital booklist environment will be dynamic and multi-layered, contrasting to dull and uninteresting printed booklists, provided by schools. The unique feature of ICDL-Sociable Booklist environment is that it will keep expanding and growing big as children keep adding more and more books of their interest and choice to the ICDL-Sociable Booklist. Since children and their peers create lists of books they would be more interested in reading books as it would create interest and peer pressure.

Along with the list of books, will be a synopsis of each book in the form of a book trailer. This feature will help children who are not interested in reading the whole book but would like to get the gist of it in a multimodal way.

It will provide opportunity for children to write their own reviews of the books they have read, as well as read other children's reviews. They will be able to rate books.

It will provide features that allow children to chat with and get feedback from other readers. There will be a place for social interaction such as book clubs or blogs, for seeking and exchanging information. This environment also provides a display of the popular or award winning books, information about the authors, and a message board to post and discuss ideas. This system will provide ways for earning incentives. There will be a personalized booklist section (history of books read, wish-list, favorite books, etc.). Children will be able to use multiple media at various instances.

Thus this environment will provide many incentives that will develop motivation, enthusiasm and trust in children and attract them to be active participants of this domain for reading books, being part of social interaction, as well as entertainment.

FUTURE WORK

The ICDL-Sociable Booklist project is in its infant stage. We at University of Baltimore's IAT-kidsteam have been working as intergenerational design partners with children 10-14 years old, to design and prototype new interactions and interfaces as well as annotation system for the existing International Children's Digital Library (ICDL) for last two years based on the findings of the contextual enquiry research. [6] Based on these existing research methods we intend to expand our research into digital booklists for ICDL, which we plan to develop beyond the proposed prototype phase in the future to integrate into ICDL for global access. Since the children's digital library which is currently static, aims at the international audience, the social and collaborative environment of the digital booklist will help bridge the gap between the static and the dynamic environments in the ICDL and help children around the world to share their views, exchange knowledge and cross cultural boundaries.

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