

Research Article

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Several Digital Literatures for Children

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Abstract: Children's literature is literary writing aimed at early childhood where today children's literature has experienced many developments from time to time both in terms of form and writing. Children's literature experiences many developments over time both in various media, such as digital and non-digital. This article focuses on digital literary media. Digital literacy is the capability to utilize technology and information from digital devices successfully and efficiently in a variety of contexts, including education, employment, and daily life, especially in the field of children's literature, education, form and genre will continue to be considered, so that children who read get good information. The purpose of this article is to explore various digital media of children's literature. This research used qualitative research method through library research. Data collection in this study was carried out by exploring several journals, books and documents (both print and electronic) and other sources of data and/or information related to research. The result of the study indicate that there are several digital media literature, namely CD-Roms, video games and picture book apps that have advantages such as entertaining children, helping children's cognitive and emotional development, helps and develops the reasoning and potential of the child, developing children's imagination and creativity.

Keywords: children, literature, digital, education.

Introduction

Literature is like other arts, is essentially an imaginative act, that is, an act of the writer's imagination in selecting, ordering, and interpreting life experience (Taylor, 1981). Children's literature is literary writing aimed at early childhood where today children's literature has experienced many developments from time to time both in terms of form and writing.

According to Şimşek & Yakar (2014), children's literature can be defined as good-quality trade books varying from prose and poetry to fiction and nonfiction, which are written for children from the ages of birth to adolescence as well as prepared according to the developmental characteristics of children within each age group. Children's literary works are in the form of novels, fairy tales that are commonly known. And digital children's literature, namely children literature on

gadgets and the internet. Digital literature combines aesthetic and educational approaches to examine this area with a special focus on electronic literature (or e-lit) in app format but also considering other forms and genres, such as web-based fiction, fan-fiction and cellphone novels (Frederico, 2017) to help children better understand and entertain children to imagine. Design challenges faced by developers of online resources for children can be better understood if we consider the existing literature on children's information retrieval and their human information behavior in the context of children's cognitive and developmental states (Martens, 2013).

Developments that make it easier for companions to guide children through digital literacy which is very simple and can be found anytime anywhere, with a very rapid new era of media. In other words, ready in place like digital

literature that can be accessed on any network. In a world where the literacy landscape is complex and rapidly evolving, the importance of theoretically informed guidance around reading for the enjoyment of engagement with digital books is likely to grow in importance in the coming decades (Kucirkova, 2016).

There are many purposes for children's literature besides entertaining children, it also can help children's development and train children's cognitive and emotional. In terms of children's literature helps children to provide teaching from things that can be easily grasped by children's reasoning. Development is like a child being able to make conclusions from the literature, whether in the form of children's novels or children's films. In essence, children learn from what they see and what they feel, and that is a natural thing. Although more research is needed, it appears that infants and young children can detect probability patterns of the nature of their own and interventions in themselves and others interventions, and at least to some extent, integrate conditional probabilities and intervention information spontaneously and without reinforcement (Gopnik, 2004).

This affects the development of character and moral education of children. Children's character is nurtured from an early age. Teaching good things will support children to become more moral through expanding knowledge from digital literature. Moral emotion attributions are emotions that children expect moral actors to feel following various pro-social and aggressive or immoral behaviors (Arsenio, 2014). Authors sure that parents don't want their children to be less moral as the next generation.

Method

This research used qualitative research method through library research. Based on Gay et al (2006:9) who said that qualitative research is the collection, analysis, and interpretation of comprehensive narrative and visual data in order

to gain into a particular phenomenon. Qualitative research is an inquiry perspective helpful for exploring and understanding a central phenomenon (Creswell, 2008). Library research is an activity related to library data collection method, reading comprehension, recording and processing materials research (Zed, 2003). Library research is a structured type of research that collects data by studying and understanding data that has a close relationship with problems from theories, documents, books, and so on (George, 2008).

Based on some of the opinions above, data collection in this study was carried out by exploring several journals, books and documents (both print and electronic) and other sources of data and/or information related to research.

Discussion

Today's progress has provided many benefits to be able to do many things easily and quickly. Even though there have been many opportunities to use technology. Digital literacy is the capability to utilize technology and information from digital devices successfully and efficiently in a variety of contexts, including education, employment, and daily life (Lotherington & Jenson, 2011), especially in the field of children's literature, education, form and genre will continue to be considered, so that children who read get good information. Therefore, digital literacy must include more than just the potentiality to make effective use of various digital resources (Sonck et al, 2011). Digital literature for children: texts, readers and educational practices is a collection of essays edited by Mireia Manresa and Neus Real that combines aesthetic and educational approaches to examine this area, with a special focus on electronic literature (or e-lit) in app format, but also considering other forms and genres, such as web-based fiction, fan-fiction and cellphone novels (Aline Frederico, 2017). Likewise in the lives of children who are used to using technology

now and have a positive influence if used properly. Therefore she claims good digital literature does exactly that: makes use of these affordances, using form in favor of content to enhance the aesthetic value of a text. Forms of content that have increased the aesthetic value of a text are united in one dimension. Digital literature for children has gained a new dimension with the proliferation of portable computers like tablets and smartphones in the past years (Aline Frederico, 2017). Digital libraries for children present a model for creating access to the world's great books—anytime, anywhere, by anyone with a computer and a connection to the Internet (Martens, 2013).

In the early 1990s companies like Discis took existing stories like *The Tale of Benjamin Bunny* and used them to create interactive CD-ROMs for younger children, ages four to six. These early narratives were produced as text with illustration, and the interactivity programmed into them was very similar to the interactivity children enjoyed with print books. As digital books they looked like their printed counterparts with a cover, frontispiece, and pages to turn. Children could either read the story themselves, or, if prompted, the computer would read the story aloud to them. It would also repeat sentences or paragraphs and pronounce or define highlighted words at the click of a mouse. Music and sound effects could accompany the stories, if the reader chose this option. Stories were usually available in at least two languages, and sometimes three four. Children were not only entertained by the texts and illustrations, but also by the physical activity of making things happen (Madej, 2003).

It became evident early on that the interactive digital environment is particularly suitable for instructionist learning (following instructions), even for very young children. As well, the physical act of using the programs can engage children for extended periods of time without boring them. Learning and engagement parents couldn't ask for a better mix.

Edutainment, the idea of combining education and entertainment that received its impetus when the publisher John Newberry advocated Locke theories in the 1700s was gaining in maturity and stature and was ideally served by the digital environment. While distinctive characters had always been a part of children's stories, in the publishing multimedia mix of the 1980s and 1990s more emphasis than ever was placed on the development of recognizable characters. Clifford the Big Red Dog and Thomas the Tank Engine were joined by Blue from Blue Clues, Teletubbies, Theodore the Tugboat, Madeline, and many others. In addition to books, audio, television, video, and in some cases digital books as well as educational software based on grade-specific school activities were created for many of these story characters. Characters like Elmo and the Cat in the Hat, familiar to children from their preschool years, now accompanied them to school and helped them progress through subsequent grades.

Interactivity is one of the key features of the digital environment; but some might not realize that it is also used as a key feature in many young children books to engage and entertain. Interactivity in books is used in different ways and for different purposes: popup, open-the-flap, and peep-through-the-hole books give children the opportunity to play and learn as they make things happen. In some books, actions are incidental and don't affect the story; in others, interactivity moves the story forward. Two books that show the difference are Disney *The Night before Christmas* and Lisa McCue *Animal Advent*. In the Disney version of *The Night before Christmas*, the Clement C. Moore story is told using classic Disney characters. A major feature of each double-page spread is a favorite-character ornament that can be pulled out of a slot and hung on a Christmas tree. This activity is not crucial for the story to move forward but does make it more engaging. In *Animal Advent*, each page consists of an illustration of a winter scene with sequential

numbers on different items on the page. There are 25 numbers throughout the book, three to five on each page. Behind each number is a picture of an animal and a rhyming couplet that follows the previous one and continues the story of the animals getting to the Christmas tree. If these are not opened in sequence or if one is missed, then the story is out of order or not complete. Our House (National Geographic), Bedtime for Bunnies (Random House), and Bear Gets Dressed (Harper and Row) all use different interactive techniques (lift-the-flap, look-through-the-hole, and lift-the-page-section) to involve children in the story. Anecdotal evidence shows that, whether incidental or integral to the story, children, young children in particular, dote on all of these interactive devices.

One of the most promising developments in interactive narrative is the opportunity for children to write and post their own stories on host websites. There are many more sites that give children the experience of writing for new media, such as Fern's Poetry Club on the Arthur site and Share a Story on PBS Kids. Children are learning to write narrative in a technologically sophisticated environment.

New reading technologies, such as the Amazon Kindle, Apple iPad, Kobo Reader, and multitouch smartphones, are fundamentally altering how we consume text (Chiong, Ree & Takeuchi, 2012; Ellis & Blashki, 2004). As more kids share access to these new devices at home, school, and the library, the landscape of children's reading and early literacy development in particular is drastically shifting (al-Yaqout, 2011; Bird, 2011; Cooper, 2005; Druin, 2009; Smith, 2002). Parents, teachers and a growing number of scholars argue that it is important to understand the nature of e-reading and the learning and engagement potential associated with interactive book applications as reading on digital reading devices begins to occupy a larger share of children's literacy (Meyers, Zaminpaima, & Frederico, 2014; Sargeant, 2015).

A picture book app is a type of software application that consists of digital picture book content that users navigate using a touchscreen interface. On iPad or Kindle Fire (Serafini, Kachorsky, Aguilera, 2015). These apps are either uploaded by the publisher to online application marketplaces, an online application commonly referred to as an "app store", or are made available for download by individual users on the individual publisher's website. Unlike the previous generation of e-books, which were essentially digital versions of traditional printed books, picture book apps typically feature interactive features that significantly alter the reader's experience (Sargeant, 2015). For example, add sound effects, animations, or background music. With features such as digitally displayed text and images, navigation buttons, and home screens in addition to the traditional e-book features, picture book apps offer reader choices, potential reading paths, and interactive features that enhance the experience. Many picture book apps include voice-over narration, game-like features, sound effects, and even animations, resulting in an experience that occasionally resembles "play" rather than "reading," in a traditional sense. The average picture book app provides a lot of narrative animation. These animations could be interactively used to draw a child into the narrative. However, interaction analysis showed that adult readers were unaware of this possibility due to their focus on operational prompts and instructions (Müller-Brauers et al, 2020).

In the children digital environment, video games make the most advanced use of interactivity. When digital technology opened the door for stories, learning games, and websites, it did so for game platforms and video games as well. Video games are engaging and fun; children embrace them enthusiastically and play them for hours.

The earliest video games were digital versions of arcade games, with activities like batting a ball or raining bullets on an enemy (e.g.,

Space Invaders). Narrative entered the domain under the guidance of designers looking for ways to make games more appealing and long-lived. Building on hunt/quest schemas, games became more complex as they introduced heroes, heroines, and enemies to engage with and manipulate (e.g., *The Legend of Zelda*). Many children video games are based on the movies made for them, such as *Lilo and Stitch* for younger children and *Harry Potter and the Chamber of Secrets* for older ones. Games based on movies use that portion of the narrative that most quickly sets the scene for action and is most suitable for carrying through typical game activities.

Video games also differ from print in that games aimed at teens and adults can be played, and often are, by much younger children. Unlike print, the vocabulary necessary to read a video game is limited and can be learned through repetition. As children use computers and video games at ever younger ages, the necessary skills are learned at younger ages also. And since playing video games is a social activity for many children, younger siblings learn from watching older brothers, sisters, and friends. Once children acquire the necessary physical skills and learn how to manipulate a range of activities in, for instance, a game like *Starfox*, they can learn to play almost any game on the market. This creates a dilemma. The power of digital technology as an educational tool is not diminished because younger and younger children, it becomes more important for them to have a breadth of programs to choose from that are more suitable for their age and that they will find attractive to use the information is entertainment or meant for an older audience. The messages are driven home just as efficiently when they focus on violence and aggression as when they focus on math, spelling, or on a child favorite character. Like basic math and spelling, these messages can remain with children for the rest of their lives. As messages meant for teens and adults reach.

Several apps, both commercial and free, that may be acquired through one of the educational-themed applications can be used for digital-based literary study. These written materials are bundled into videos and applications that millennial kids find appealing when studying literature. The variety of educational-themed applications available to teachers as digital teaching resources, including teacher's room, Indonesian language resources, literary history, the most comprehensive collection of Indonesian literature, and others, will undoubtedly appeal to millennial children. Remember that today's millennial kids are dependent on the widespread use of devices. Online gaming is more popular than educational content.

The values of education are very important to be taught early in learning. Planting educational values can be taught through character education. Planting educational values on students can also be taught through literary works, for example in poetry, drama, or novels. Literature containing educational values can provide motivation for students in character building. Faris, Mimi Mulyani and Astini Su'udi (2015, p. 112) explained that, of course, the use of literature must be adapted to the theme of the character values being taught so that students can relate to the existing concepts. If the use of literature is adjusted to the theme of character values in the field of Indonesian language study, students will be accustomed to practice writing short stories, even as a means of communication, a means to convey something to the reader. Almost all literature are full of moral values and attitudes towards characters who deserve to be emulated, especially for millennial children. Development of Basic Competencies (KD) is not limited by the formulation of Core Competencies (KI) but is adjusted to the characteristics of subjects, competencies, the scope of material, and psychopedagogy. Therefore, building the character of students is the main task of parents and teachers. Similarly, literary learning can be

used as teaching material, because literature has positive values such as religious, social, cultural, ethical and humanitarian values. Naim (in Suryadi & Agus Nuryatin, 2017) explain character refers to a set of attitudes, behaviors, motivations, and skills.

Many digital media products and interactive toys for young children to use at home are designed to teach language and reading readiness skills, such as the alphabet, phonics, word recognition, word building, and learning a second language. Research has found that well-designed digital learning programs in these areas can be effective (Fisch, Shulman, Akerman, & Levin, 2002; McGee & Richgels, 2006; Segers & Verhoeven, 2002). For example, Riverdeep's Destination Reading curriculum for pre-kindergarten to first grade and LeapFrog's Leap's Phonics Library improved children's acquisition of fundamental language knowledge and skills, such as the alphabet and word concepts (e.g., Spencer & Baskin, 1997). Digital media can help boost children's vocabulary skills and their acquisition of spelling and reading (Din & Calao, 2001), can improve their early writing skills (Moxley, Warash, Coffman, Brinton, & Concannon, 1997), and can enhance word recognition and word creation, compared to traditional teaching methods (Reitsma & Wesseling, 1998). An experiment found that Downloaded by [Aston University] at 01:54 31 January 2014 animated multimedia books enhanced awareness of letter sounds and words among children ages 3 to 6 (Chera & Wood, 2003). Online learning has helped preschoolers learn foreign languages. One study found that Internet-based digital stories improved English listening comprehension among 6-year-old Spanish children (Verdugo & Belmonte, 2007). Other online learning studies found that children who were not deaf improved their abilities with sign language (Daniels, 2001; Ellis & Blashki, 2007).

Conclusion

There are several digital media literature, namely CD-Roms, video games and picture book apps that have advantages such as entertaining children, helping children's cognitive and emotional development, developing children's imagination and creativity. Not only for entertainment, digital media as a place for children to develop their writing talents and post their own stories on websites.

Well-designed computer programs that are open-ended and offer the user some control over learning activities, and provide opportunities for creative choices or imaginative expression, can facilitate children's creative approaches to learning and can increase interest and engagement. A study found, for example, that young children who were exposed regularly to this type of open-ended computer-based learning displayed more curiosity, hypothesizing, problem formulization and solution, collaboration, motivation, positive self-evaluation, and positive learning evaluation than did children who engaged in more structured computer-assisted instruction with very little user control (Clements & Nastasi, 1992, as cited in McCarrick & Li, 2007). Digital media can teach skills for artistic and imaginative expression in domains such as music, drawing, painting, animation, writing, story-telling, and poetry. For example, there are digital tools that engage young children in making stories using multimedia (Montemayor, Druin, Chipman, Farber, Downloaded by [Aston University] at 01:54 31 January 2014 276 D. A. Lieberman et al. & Guha, 2004) and tools that help them learn about colors and how to mix them. Chromarium is a mixed reality environment that combines digital media displays and hands-on materials to enable young children ages 4 to 7 to experiment with and learn about color mixing by carrying out various digital and physical actions. Research has found that it is an effective learning environment that teaches a range of concepts about color and color mixing (Price &

Rogers, 2004; Rogers, Scaife, Gabrielli, Smith, & Harris, 2002).

References

- Al-Yaqout, G. (2011). From slate to slate: What does the future hold for the picture book series? *New Review of Children's Literature and Librarianship*, 17(1), 57-77. DOI: 10.1080/13614541.2011.573679
- Arsenio, W., & Ramos-Marcuse, F. (2014). Children's Moral Emotions, Narratives, and Aggression: Relations With Maternal Discipline and Support. *The Journal of Genetic Psychology*, 175(6), 528-546. DOI: 10.1080/00221325.2014.982497
- Bird, E. (2011). Planet App: Kids' book apps are everywhere. But are they any good? *School Library Journal*, 57(1), 26-31. http://www.schoollibraryjournal.com/slj/home/888450312/planet_app_kids_book_apps.html.csp
- Cooper, L. Z. (2005). Developmentally appropriate digital environments for young children. *Library Trends*, 54(2), 286. DOI: 10.1353/lib.2006.0014.
- Creswell, J. (2008). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. Boston: Pearson Prentice Hall.
- Druin, A. (2009). *Mobile technology for children: Designing for interaction and learning*. Burlington MA: Morgan Kaufmann.
- Ellis, K., & Blashki, K. M. (2004). Toddler techies: a study of young children's interaction with computers. *Information Technology in Childhood Education Annual*, , 77-96. <http://editlib.org/p/12895/>
- Frederico, A. (2017). Digital literature for children: texts, readers and educational practices. *Barnelitterært forskningstidsskrift: Nordic Journal of Childlit Aesthetics*, 8, 1-3. <https://doi.org/10.1080/20004508.2017.1285551>
- Gay, Lorraine R., Mills, Geoffrey E., Airasian, Peter W L. (2006). *Educational Research Competencies for Analysis and Application*. New Jersey : Pearson Prentice Hall.
- George, M. W. (2008). *The elements of library research: What every student needs to know*. Princeton University Press.
- Gopnik, A., Glymour, C., Sobel, D. M., Schulz, L. E., Kushnir, T., & Danks, D. (2004). A Theory of Causal Learning in Children: Causal Maps and Bayes Nets. *Psychological Review*, 111(1), 3-32. <https://doi.org/10.1037/0033-295X.111.1.3>
- Kucirkova, N., Littleton, K., & Cremin, T. (2016). Young children's reading for pleasure with digital books: six key facets of engagement. *Cambridge Journal of Education*, 47(1), 67-84. DOI: 10.1080/0305764x.2015.1118441
- Chiong, C., Ree, J., Takeuchi, L. (2012). Comparing parent-child co-reading on print, basic, and enhanced e-book platforms. The Joan Ganz Cooney Center at Sesame Workshop, 78-78. http://www.joanganzcooneycenter.org/upload_kits/jgcc_ebooks_quickreport.pdf
- Lotherington, H., & Jenson, J. (2011). Teaching multimodal and digital literacy in L2 settings: New literacies, new basics, new pedagogies. *Annual Review of Applied Linguistics*, , 31, 226-246. <https://doi.org/10.1017/S0267190511000110>
- Madej, K. (2003). Towards digital narrative for children: from education to entertainment, a historical perspective . *Computers in Entertainment (CIE)*, 1(1). DOI: 10.1145/950566.950585
- Martens, M. (2013). Considerations of how Children Think: Danish Responses to the International Children's Digital Library. *New Review of Children's Literature and*

- Librarianship, 19(2), 139-156.
<https://doi.org/10.1080/13614541.2013.813339>
- Meyers, E. M., Zaminpaima, E., & Frederico, A. (2014). The Future of Children's Texts: Evaluating Book Apps as Multimodal Reading Experiences. *iConference 2014 Proceedings*, 916–920.
<http://dx.doi.org/10.9776/14312>
- Müller-Brauers, C., Miosga, C., Fischer, S., Maus, A., & Potthast, I. (2020). Narrative Potential of Picture-Book Apps: A Media- and Interaction-Oriented Study. *Frontiers in Psychology*, 11. DOI: 10.3389/fpsyg.2020.593482
- Sargeant, B. (2015). What is an ebook? What is a book app? And why should we care? Analysis of contemporary digital picture books. *Children's Literature in Education*, 46, 454–466.
<http://dx.doi.org/10.1007/s10583-015-9243-5>
- Serafini, F. (2015). Paths to interpretation: Developing students' interpretive repertoires. *Language and Literacy*, 15, 118–133.
<http://dx.doi.org/10.20360/G2459V>
- Şimşek, T., & Yakar, Y. M. (2014). Çocuk ve edebiyat. İçinde T. Şimşek (Editör). Kuramdan uygulamaya çocuk edebiyatı el kitabı. 3. Baskı (13-44). Ankara: Grafiker Yayınları.
- Smith, C. R. (2002). Click on me! An example of how a toddler used technology in play. *Journal of Early Childhood Literacy*, 2, 5–20.
<https://doi.org/10.1177/14687984020021001>
- Sonck, N., Livingstone, S., Kuiper, E., & de Haan, J. (2011). Digital Literacy and Safety Skills. *Educational Research*, 1–4.
https://www.researchgate.net/publication/50902991_Digital_literacy_and_safety_skills
- Taylor, R. (1981). *Understanding the Elements of Literature*. California: Palgrave Macmillan.
- Zed, M. (2003). *Metode Penelitian Kepustakaan*. Jakarta: Yayasan Obor Indonesia.