

Early Literacy in the Digital Age: A Research Round-Up!

Presentation Summary of Research Round-up: Tess Prendergast

The research I discuss is general in terms of technology as it has been studied and thought about in early childhood: librarians have to “converge” this research with our own expertise and mandates, not all ways an easy task!

What we are going to do:

- Some questions about technology in early childhood?
- A discussion of what we need in terms of research
- A few examples from the research I have read
- Considering inclusion as a benefit or bonus to having digital tech in kids’ lives

We all need: Balanced, current and relevant data! Not a tall order at all!

We need all three of these things in order to make the best decisions possible in our unique communities and circumstances.

This tall order would be a lot easier if Library research was plentiful on this topic, which it is not. We are forced to borrow heavily from early childhood education and early literacy spheres. While valuable and respectable in their own right, wholesale application to public library contexts is not without its own hazards.

Balance: research that clearly acknowledges the need to provide children with a range of opportunities from which to learn, opportunities which together help support their development across all domains, not just those of early literacy learning: balanced research will emphasize the importance of HUMAN INTERACTIONS in early learning.

Currency: Current research will build on studies from the past to a certain extent, but truly current research will take into account contemporary, present day realities of children in our communities: older research studies that tell us it is bad to have the television on all day are not useful in this conversation: we already know that: what we need to know is how contemporary children are experiencing technology in their lives. Our practices and decisions should be based on ACTUAL childhood, not IDEAL childhood.

Relevance: The data we draw on for making the best digital tech decisions in early literacy / library services for children should be well matched to the contexts and realities of families who are most like those in our communities – not just the ones we see in our libraries, so we need to try to understand the realities of contemporary Western childhood, in all its diversity. This is not an easy task....hence the very tall order here.

I recommend starting with the NAEYC – the National Association for the Education of Young Children. Their joint position statement with the Fred Rogers centre (also on your handout) says (and very clearly in their key messages:

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- *When used intentionally and appropriately, technology and interactive media are effective tools to support learning and development.*
- *Intentional use requires early childhood teachers and administrators to have information and resources regarding the nature of these tools and the implications of their use with children.*
- *Limitations on the use of technology and media are important.*
- *Special considerations must be given to the use of technology with infants and toddlers.*
- *Attention to digital citizenship and equitable access is essential.*
- *Ongoing research and professional development are needed.*

You may have heard that the American Academy of Pediatrics also has a statement about media and children: Some of that statement goes like this:

Studies have shown that excessive media use can lead to attention problems, school difficulties, sleep and eating disorders, and obesity. In addition, the Internet and cell phones can provide platforms for illicit and risky behaviors.

By limiting screen time and offering educational media and non-electronic formats such as books, newspapers and board games, and watching television with their children, parents can help guide their children's media experience. Putting questionable content into context and teaching kids about advertising contributes to their media literacy.

The AAP recommends that parents establish "screen-free" zones at home by making sure there are no televisions, computers or video games in children's bedrooms, and by turning off the TV during dinner. Children and teens should engage with entertainment media for no more than one or two hours per day, and that should be high-quality content. It is important for kids to spend time on outdoor play, reading, hobbies, and using their imaginations in free play.

Television and other entertainment media should be avoided for infants and children under age 2. A child's brain develops rapidly during these first years, and young children learn best by interacting with people, not screens.

It is important to not let this barrage of somewhat ambiguous at best and conflicting at worst data overwhelm you so much that you freeze and choose not to do anything. The available research is reassuring enough: digital tech tools can (and do) support early learning across many contexts: just because there is scant research about library contexts does not mean we cannot proceed with confidence.

We cannot dive in willy nilly and hope that what we come up with is going to meet our goals: we need intentional, deliberate and thoughtful applications of what we know so far about how technology can support children (and families) and understanding that as professionals it is critical that we know what these tools are all about and be capable and comfortable navigating the ambiguity.

A is for avatar: Young children in the literacy 2.0 worlds and literacy 1.0 schools by K. Wohlwend

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This short and highly recommended article emphasized play: this is early childhood we are talking about and most of us agree on the importance of play.

Children pretend their way into literacies by “playing at” using computers, iPads, or cell phones as they try on technologically savvy user identities.

Wohlwend also contends with the digital divide and promote the idea that the early childhood classroom is the ideal place for disadvantaged children to engage with the digital media that shapes communication in the world today.

She also contends with the spectre of the “natural child” and how this idealized notion of childhood “distances our youngest learners from access to digital technologies that make up modern literacies”.

Questioning the common- place (just the way things are) and commonsensical (what we just know) allows us to see how our beliefs keep us compliant and complicit in maintaining the current ways of doing things in schools

This same kind of questioning is what we as professional librarians need to be doing with regards to the kinds of mainstream early and family literacy messages we tend to spout. It is just not good enough to say that we have always been about “the best books for children”. We are about content, regardless of platform or media and our job is to embrace it, evaluate it and continue to provide the best services to families in our communities with regards to all content (books, apps, games etc).

At a minimum, we need policies that remove institutional barriers and actively support a permeable literacy curriculum that encourages young children to bring their cultural resources to school, including digital technologies and popular media.

The biggest barrier is the negative attitude about children and screens though. Screens, meaning all this digital tech, games, iDevices and other handhelds can be viewed in both positive and negative light, simultaneously - a good critical educator (including librarians!) will be able to cope with this ambiguity and move forward with curricular and pedagogical choices that support literacy development without being detrimental in social and physical domains. I believe we can do this folks, and articles like this help pave the way, so read it!

In Authorship as assemblage, Kari Lynn Winters explores the multimodal literacies evident in a 6 year old boy’s play within the Webkinz online world: the literacy material evident in the Webkinz world allows for sophisticated model of this child’s early literacy/meaning making to be revealed and discussed within her framework of authorship. Webkinz has been studied by at least 2 other early literacy scholars that I know of, so clearly there are some interesting goings-on in Webkinz world for young children in terms of literacy.

Not without its hazards as yet another commercial product aimed at children, these kinds of digital playgrounds do offer up some food for thought about what literacy is evident therein, how

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these sites succeed in engaging children and what all else is going on as they navigate these worlds.

Jackie Marsh is a UK scholar who has studied children and technology for many years: I love this woman so much I have added 3 of her articles to your reading list: she is the one of the most important “go to” scholars about early childhood and technology.

Here are some of her thoughts on the topic: Jackie Marsh (2004) reports on her study of a group of young children's “techno-literacy” practices. Building on the paradigm in which children are seen as “active meaning-makers”, she describes how her participants demonstrate varied avenues to learning literacy by their interaction and engagement with technology media such as television programs and video-games. Marsh identifies and confronts the intense focus still placed on literacy as a mainly print-based concept. She believes this focus has led to over-emphasizing formal, printed and text-based reading and writing skills. She also believes the negative views of media in young children's lives are largely unfounded and not reflective of what is revealed in the existing research. In her 2004 study, Marsh found that families value the role that television plays in their children's lives and that parents actively participate in their children's engagement with the media text made available to them via shows such as Bob the Builder. Parents believe such television shows facilitate imaginative social and cognitive development. Marsh emphasizes the importance of non-print media, such as television, computers and mobile phones, that children encounter in their non-school lives.

Her other 2006 study followed the work of a small group of 3 and 4 year olds who learned how to make stop-motion animation videos in their preschool: they used small toys, together with a digital camera and an animation program loaded onto a computer with which to accomplish this task and the results were impressive.

More recently, an interesting case study by researchers Jowett, Moore and Anderson (2012) studied the efficacy of an iPad based video modelling package to teach numeracy to a child with ASD. Clear gains in five-year-old Jack's ability to identify, write and comprehend numerals were evident after the short intervention program concluded. Most interesting to me is the fact that the researchers chose to exploit Jack's pre-existing interest and experience with the ridiculously popular iPad app game Angry Birds! So, his ASD notwithstanding, this five-year old boy's preferred popular media was very effectively harnessed to help him acquire numeracy skills.

We really could / should have a separate session just on e-books right? But I thought this particular study was worth mentioning.

Shamir, Korat and Fellah (2012) investigate the potential role of e-books, specifically digital versions of children's picture books, in promoting vocabulary, phonological awareness and print concepts in children at risk for learning disabilities. Drawing on previous research suggesting the beneficial role that technology can play in the lives of children with special needs, the researchers aimed to provide exciting and interesting experiences to fully engage their research participants and therefore harness their engagement for specific literacy skill development. In this study, the researchers hypothesize that selected e-books designed to stimulate multiple

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cognitive functions can support literacy and language development. The outcomes of the study suggest that e-books with interactive features that are consistent with the storyline may offer support for the development of vocabulary and phonological awareness, as well as awareness of the storyline, in groups of at-risk children.

Mainstream digital technology can (and should) be understood to be very useful INCLUSION tools.

What do I mean by that?

To make a very long story short, mainstream digital devices like iPads and android devices are now converged with what used to be very expensive and very complex (and hard to acquire) Assistive and Augmentative communication devices also known as AAC. These things used to run in to the thousands of dollars and were/are great for allowing nonverbal children a way to communicate. The iPad meant that they no longer cost a zillion dollars and families could go ahead and buy their own. Speech-language pathologists quickly got on board and those who specialize in AAC are promoting the iPad (or similar device) as a great way to give a nonverbal (or preverbal child with a significant disability) a way to communicate...some speech pathologists have even designed their own AAC apps for iPads and android.

I haven't been able to find any discussions of this in the literature that I've read thus far BUT...anytime a tool can be used for all kids to learn together, in the same context I am in.

So, my thinking is this: a kid, let's call her Maggie, has cerebral palsy or whatever and has trouble making her spoken words clear enough for anyone to understand her speech. Using a program on her own iPad, Maggie can talk to her friends and teachers at daycare, her family members, anyone who will listen to her. It TALKS for her...

She will likely learn to read as she learns to use this device to talk for her too, as the picture symbols are labelled with conventional text, but that is just an added bonus.

Here's the real bonus: her little friends, who she's conversing with using this device? They are watching her: they are also learning that symbols carry meaning – and that my friends is what literacy is! So the kid with a disability in this scenario becomes the expert in terms of showing her facility with using symbols to make meaning. So to my mind, normalizing the iPad as a general literacy learning device in diverse groups of youngsters can only serve inclusion aims where kids participate and learn together. The device is just one of many tools that kids see people interacting with and communicating with in their daily lives and this is no different for kids who actually use them to talk for them.

So in these few minutes, I have scratched the surface of research on early literacy in the digital age, and given you my own reasons for why I find it so exciting.

Journal Articles

- Burnett, C. (2010). Technology and literacy in early childhood educational settings: a review of research. *Journal of Early Childhood Literacy*, 10 (3), 247-270.
- Dooley, C.M., Flint, A.S., Holbrook, T, May, L., Albers, P.(2011). The digital frontier in early childhood education. *Language Arts*, 89(2), 83.
- Marsh, J. (2011). Young children's literacy practices in a virtual world: Establishing an online interaction order. *Reading Research Quarterly*, 46, 101-118.
- Marsh, J. (2004). The techno-literacy practices of young children. *Early Childhood Research*, 2, 51-66.
- Marsh, J. (2006). Emergent Media Literacy: Digital Animation in Early Childhood. *Language and Education* 20,(6),493-506.
- Jowett, E.L., Moore, D.W., Anderson, A. (2012). Using an iPad-based video modelling package to teach numeracy skills to a child with and autism spectrum disorder. *Developmental Neurorehabilitation*, 15(4), 304-312.
- Lovely, G., & Moberly, D. (2012). Pass it forward. *T.H.E. Journal*, 39(8), 43-45.
- Neuman, S. B., & Celano, D. C. (2013). Don't level the playing field: Tip it toward the underdogs. *Education Digest*, 78(7), 50.
- Lankshear, C, & Knobel, M. (2003). New technologies in early childhood literacy research: a review of research. *Journal of Early Childhood Literacy*, 3 (1), 59-82.
- Shamir, A., Korat, O., & Fellah, R. (2012). Promoting vocabulary, phonological awareness and concept about print among children at risk for learning disability: can e-books help? *Reading and writing*, 25 (1), 45-69.
- Wohlwend, K. (2010). Focus on Policy: A is for avatar: Young children in literacy 2.0 worlds and literacy 1.0 schools. *Language Arts*, 88, 144-152.
- Brooks-Gunn, L. & Donahue, E.H. (2008). Introducing the issue. *The Future of Children*, 18(1), 3-10.
- Wohlwend, K.E. (2011). Playing their way into literacies: Reading, writing, and belonging in the early childhood classroom. (2012). *Journal of Early Childhood Literacy*, 12(4), 443-447.

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Books

Guernsey, L.(2012). *Screen time : how electronic media-from baby videos to educational software affects your young child*. New York: Basic Books.

Puerling, B. (2012). *Teaching in the digital age: Smart tools for age 3 to grade 3*. St. Paul, MN: Redleaf Press.

Simon, F., & Nemeth, K. N. (2012). *Digital decisions: Choosing the right technology tools for early childhood*. Lewisville, NC: Gryphon House.

Vasquez, V. M., Felderman, C. B., & Ebooks Corporation. (2012). *Technology and critical literacy in early childhood*. New York, NY: Routledge.

Wohlwend, K. E. (2013). *Literacy playshop: new literacies, popular media, and play in the early childhood classroom*. New York: Teacher's College Press

Web Links

American Academy of Pediatrics (2012). Media and children. Retrieved from <http://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Pages/Media-and-Children.aspx?nfstatus=401&nftoken=00000000-0000-0000-0000-000000000000&nfstatusdescription=ERROR%3a+No+local+token>

National Association for the Education of Young Children (2012). Technology and young children. Retrieved from <http://www.naeyc.org/content/technology-and-young-children>

The Joan Ganz Cooney Center at Sesame workshop. www.joanganzcooneycenter.org

Fred Roger Center for Early Learning and Children's Media. www.fredrogerscenter.org
