

Webinar Learning Series: How Young Children Learn from Screens

Starting at 3:00 pm CST

While you are waiting for the webinar to start:

- Download Handout while you are waiting:
bit.ly/tec43020
- Introduce yourself in the chat

Erikson Institute

Technology in Early Childhood Center

How Young Children Learn from Screens

Presented by Alexis Lauricella, PhD and Jenna Herdzina, MS
Technology in Early Childhood (TEC) Center



Webinar Logistics & Details

- Please use the chat and Q&A functions
- 30-40 minutes of presentation
- Opportunity for Q&A with TEC Center team at the end
- Recording and will share it with everyone who registered

Handout: bit.ly/tec43020

About Technology in Early Childhood (TEC) Center at Erikson Institute

Erikson Institute

Technology in Early Childhood Center



Alexis Lauricella, PhD
Associate Professor &
Director

Jenna Herdzina, MS
Program Manager

Missi Jacobson, MSW
PhD Student & Research
Assistant

Morgan Russo
Graduate Student,
Intern

Erikson Institute

Erikson Institute is a graduate school in child development, early education, and social work

Mission: Erikson Institute educates, inspires, and promotes leadership to serve the needs of children and families so that all can achieve optimal education, social, emotional, and physical well-being



Erikson Institute

Technology in Early Childhood Center

Research

Practice

Leadership



Connecting theory, policy and research to practice

TEC Center Resources and Opportunities

- TEC Center:
 - Professional Development
 - Educator Tips and Lesson plans
 - Research
- Erikson Institute
 - Summer Institutes
 - MSECE STEM Concentration Degree and Certificate programs
 - Many other resources: SEL Initiative, Facilitating Attuned Interactions (FAN)



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Webinar Agenda

- Can children learn from screens?
- What makes learning from screens hard for children?
- Considerations for remote learning during the COVID-19 Outbreak
- Q&A

Choose Technology Tools Intentionally



Can children learn from screens?

Research & Evidence



Parent-child interactions during traditional and computer storybook reading for children's comprehension: Implications for electronic storybook design?

Alicia R. Lauricella^{1*}, Rachel Barr¹, Sarah L. Cahoon²

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ARTICLE INFO
ABSTRACT
 The purpose of this study was to examine how parents and children interact during traditional and computer storybook reading. Thirty-two parents and their 3-year-old children were recruited to participate in a study that examined how parents and children interact during traditional and computer storybook reading. Results showed that parents and children interacted differently during traditional and computer storybook reading. Parents used more direct language during computer storybook reading, while children used more direct language during computer storybook reading. Implications for electronic storybook design are discussed.

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YEARS AND COUNTING

Media and Young Children's Learning

Heather L. Kirkorian, Ellen A. Wartella, and Daniel R. Anderson

Summary
 Electronic media, particularly television, has long been criticized for their potential impact on children. One area for concern is how early media exposure influences cognitive development and academic achievement. Heather Kirkorian, Ellen Wartella, and Daniel Anderson summarize the relevant research and provide suggestions for maximizing the positive effects of media and minimizing the negative effects.

One focus of the authors is the seemingly unique effect of television on children under age five. Although research clearly demonstrates that well-designed, age-appropriate educational television can be beneficial to children of preschool age, studies on infants and toddlers suggest that those young children may benefit most and learn from real-life experiences than they do from video. Moreover, some research suggests that exposure to television during the first few years of life may be associated with poorer cognitive development.

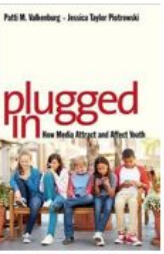
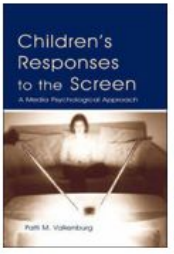
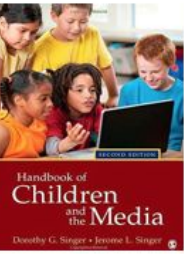
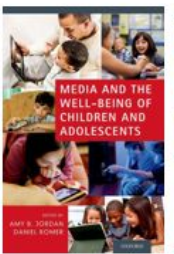
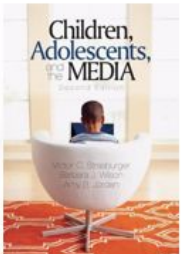
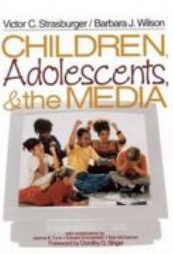
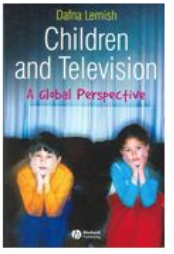
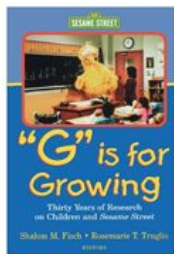
With respect to children over five, the authors emphasize the importance of content in mediating the effect of television on cognitive skills and academic achievement. Early exposure to age-appropriate programs designed around an educational curriculum is associated with cognitive and academic achievement, whereas exposure to pure entertainment and violent content is particularly associated with poorer cognitive development and lower academic achievement.

The authors point out that producers and parents can take steps to maximize the positive effects of media and minimize the negative effects. They note that research on children's television viewing can inform guidelines for producers of children's media to enhance learning. Parents can select well-designed, age-appropriate programs and view the programs with their children to maximize the positive effects of educational media.

The authors' aim is to inform policymakers, educators, parents, and others who work with young children about the impact of media, particularly television, on preschool children, and what society can do to maximize the benefits and minimize the costs.

www.kqed.org/kids

Heather Kirkorian is a postdoctoral research associate at the University of Massachusetts Lowell. She received a Ph.D. in Psychology from the University of Colorado Boulder. Ellen Wartella is a professor at the University of Colorado Boulder. Daniel R. Anderson is a professor at the University of Colorado Boulder.



Learning from Screen Media

- High quality educational media (Fisch & Truglio, 2001)
- Characters are important (Lauricella et al., 2013)
- Narrative is critical (Fisch, 2006)
- Repetition & predictability help (Barr et al., 2007)
- Co-viewing with an adult is great (Strouse et al., 2013)
- Opportunities for extra, repeated practice (Pitchford, 2014)



How to Help Children Learn: Takeaways

- Look for trusted sources (e.g., PBS Kids, *Sesame Street*)
- Look for content that has a simple narrative that supports the learning lesson
- Find opportunities for adult (or older sibling) engagement
- Use the technology to support a specific outcome or provide extra practice/new exposure to content

What makes learning from screens hard?

Learning from media is HARD

- 2D/3D are different
- We have to learn how to process and understand information from a screen
- Scene changes, cuts, and zooms only exist in digital media content- not in our real world
- Sound and visual effects have meanings that we learn about through media experiences
- Processing media content requires keeping a lot of information in mind

Smith, Anderson, & Fisher, 1985

Video Example



Evidence that children have to learn to learn from a screen

- New research with infants, preschoolers, and adults used eye tracking to examine eye movements while watching clips from Sesame Street

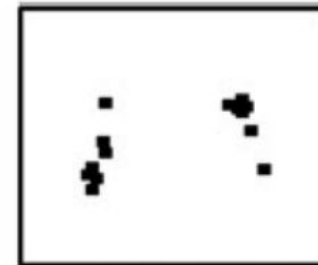
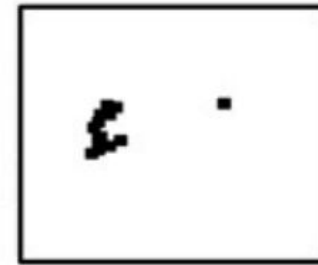
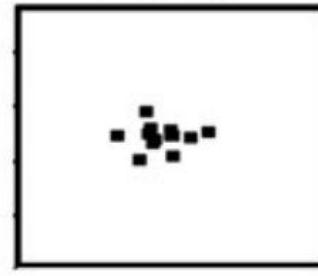


Kirkorian, Anderson & Keen, 2012

1-Year-Olds

4-Year-Olds

Adults



Do not assume comprehension

Even though children look like they are paying attention....



they may not be
comprehending



Inquire and ask questions!

Tablet Devices



Children & Tablet Technology

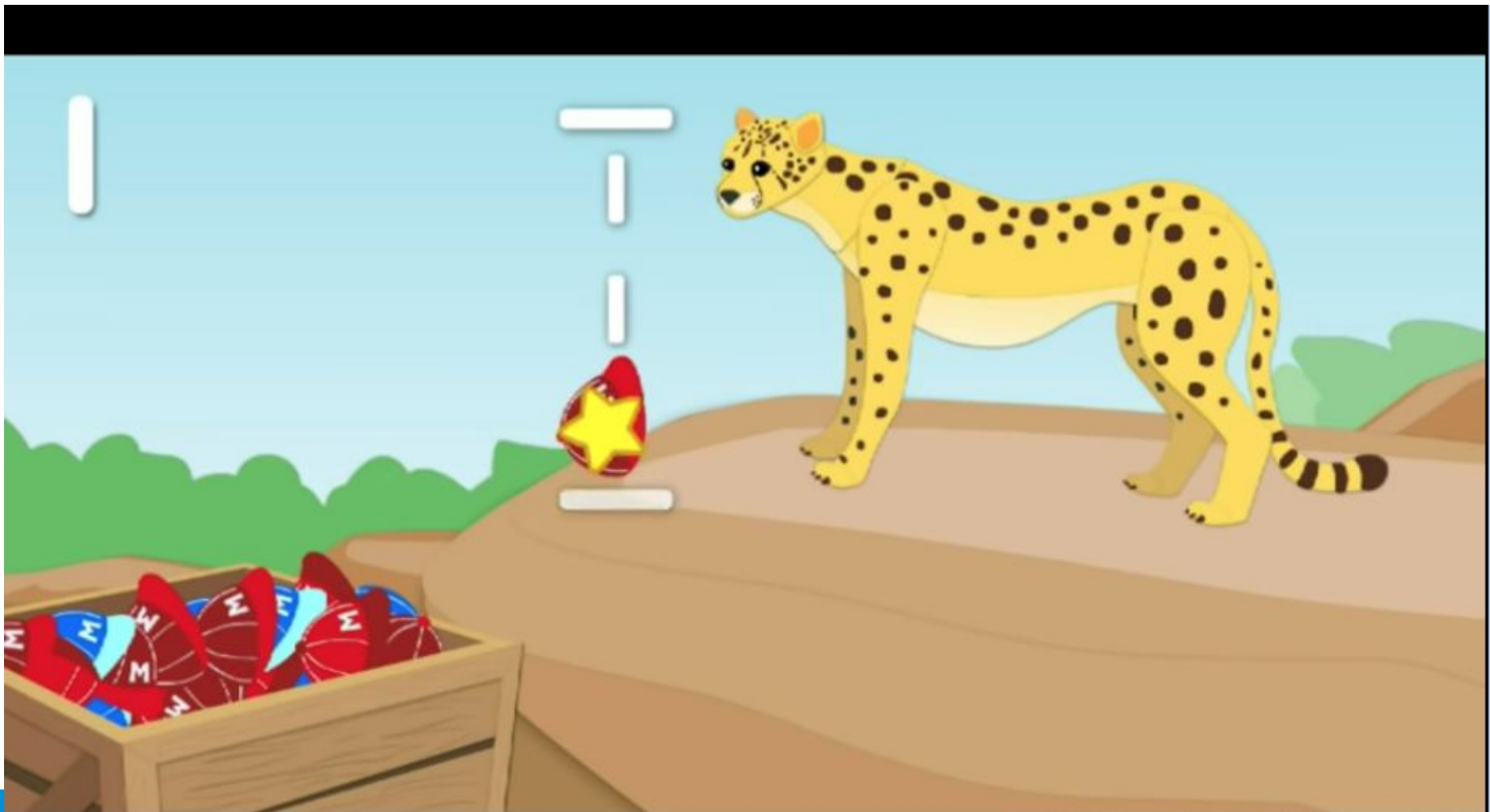
We are still learning, but:

- Some evidence of reading and math learning from apps (Masataka, 2014)
- But, infants, toddlers, and preschoolers seem to learn more from video than touchscreen (Aladé, et al., 2016; Choi et al., 2016, Kikokian et al., 2016)

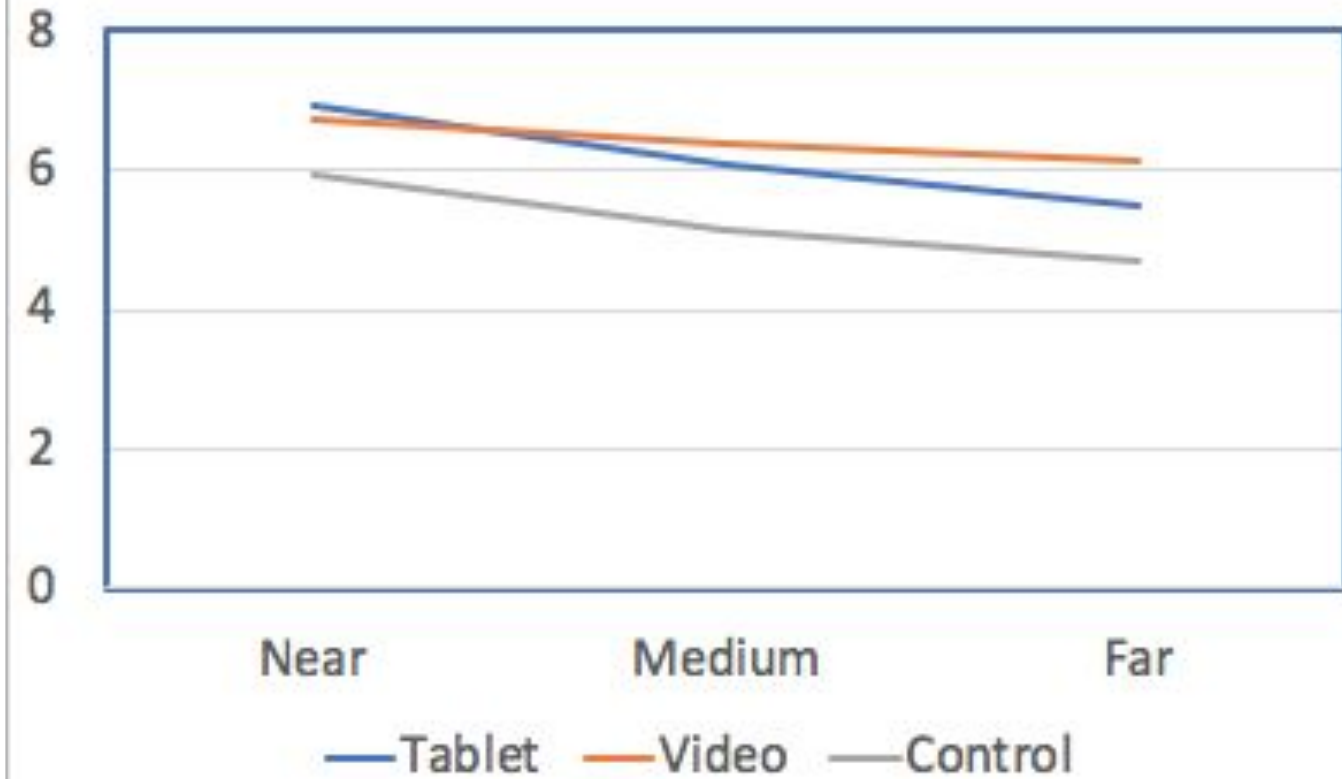
Learning from tablets vs video



(Aladé et al.,2016).



Learning



Gaming and Learning

Opportunities

- Gaming is fun
- Increased engagement
- Continuous desire to play
- “Chocolate covered broccoli”

Concerns

- Educational games sometimes lose the fun
- Narrative may be minimal
- Educational content is too overt
- Feels too quiz-like/forced

How to Help Children Learn from tablets: Takeaways

- Minimize distractions within the app (hotspots)
- Engaging narrative and characters to increase engagement
- Encourage adult interaction and support during and after app use
- Use the technology to support a specific outcome or provide extra practice

Considerations for remote learning during the COVID-19 Outbreak

Children and screens now

- These times are new for every single one of us
- Children need their basic needs, like safety, met first
- Technology can be one tool, among many others



5 Takeaways

1. Use technology to support/maintain relationships
2. Choose tools intentionally
3. Keep use short and focused
4. Encourage repetition of content using different formats
5. Integrate consistent characters/puppets into lessons, activities, digital experiences



Photo courtesy of news.vanderbilt.edu

**Please fill out Google Form:
<https://forms.gle/7LbKv7aa7SrHDsG5A>**

Q&A

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Thank you! Stay tuned for our next webinar!

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