



ZERO TO THREE
Early connections last a lifetime

Screen Sense: What the Research on Says (and Doesn't Say) About Young Children and Screens

Rebecca Parlakian, M.A., Ed.

Senior Director of Programs, ZERO TO THREE

Today's Objectives



- Major research findings on screen usage by children from birth-18 years
 - Prevalence
 - Impact of television
 - Impact of other screen media
- Suggested guidelines, questions and comments

Media Has Changed



- How did you use media when you were young?

TV Rules: Time, supervision, content?

Media type: Computer, VCR, TV?

24-Hour Movement Guidelines: 0-4 years



- **Infants (< 1 year)**

- **Move:** At least 30 minutes of tummy time per day
- **Sleep:** 14-17 hours per day
- **Sit:** Not being restrained for more than 1 hour at a time. Screen time not recommended.

- **Toddlers (1-2 years)**

- **Move:** At least 180 minutes spent in active play
- **Sleep:** 11-14 hours per day
- **Sit:** Not being restrained for more than 1 hour at a time. Screen time not recommended, and no more than 1 hour.

- **Preschoolers (3-5 years)**

- **Move:** At least 180 minutes spent in active play
- **Sleep:** 10-13 hours per day
- **Sit:** Not being restrained for more than 1 hour at a time. Screen time not recommended, and no more than 1 hour.



Minimize screen time:

- Screen time for children younger than 2 years is not recommended.
- For children 2 to 5 years, limit routine or regular screen time to less than 1 hour per day.

Mitigate (reduce) the *risks* associated with screen time:

- Be present and engaged when screens are used and, whenever possible, co-view with children.
- Be aware of content and prioritize educational, age-appropriate and interactive programming.

As a family, **be mindful** about the use of screen time:

- Remember: too much screen time means lost opportunities for teaching and learning.

Adults should model healthy screen use:

- Turn off their devices at home during family time.
- Turn off screens when not in use and avoid background TV.

Trends in Media Usage for Canadian Toddlers



- Nearly 80% of 2-year-olds and nearly 95% of 3-year-olds spend more time engaged with screens than recommended by groups such as the World Health Organization
- 2-year-old children averaged 2.4 hours of screen time per day
- 3-year-old children averaged 3.6 hours of screen time per day,

Using Research to Set the Record Straight



- Advice on screens is often conflicting.
- Commitment to providing parents and professionals solid, research-based guidance to make informed, mindful decisions.

What We Know Helps Children Learn



- Positive and nurturing adult–child relationships
- Quality learning experiences that promote:
 - language
 - exploration
 - experimentation
 - problem solving
 - creative thinking
 - social skills
- Opportunities to transfer learning: Ability to apply information from a past experience to a new situation



ZERO to THREE
Early connections last a lifetime

The Three C's



The 3C's

- Child,
- Content, and
- Context

(Guernsey, 2014, https://www.youtube.com/watch?v=P41_nyYY3Zg)



- Skills develop over time.
- Transfer of Learning: What is it?
How does it develop?
- Learning from screens requires
Transfer of Learning



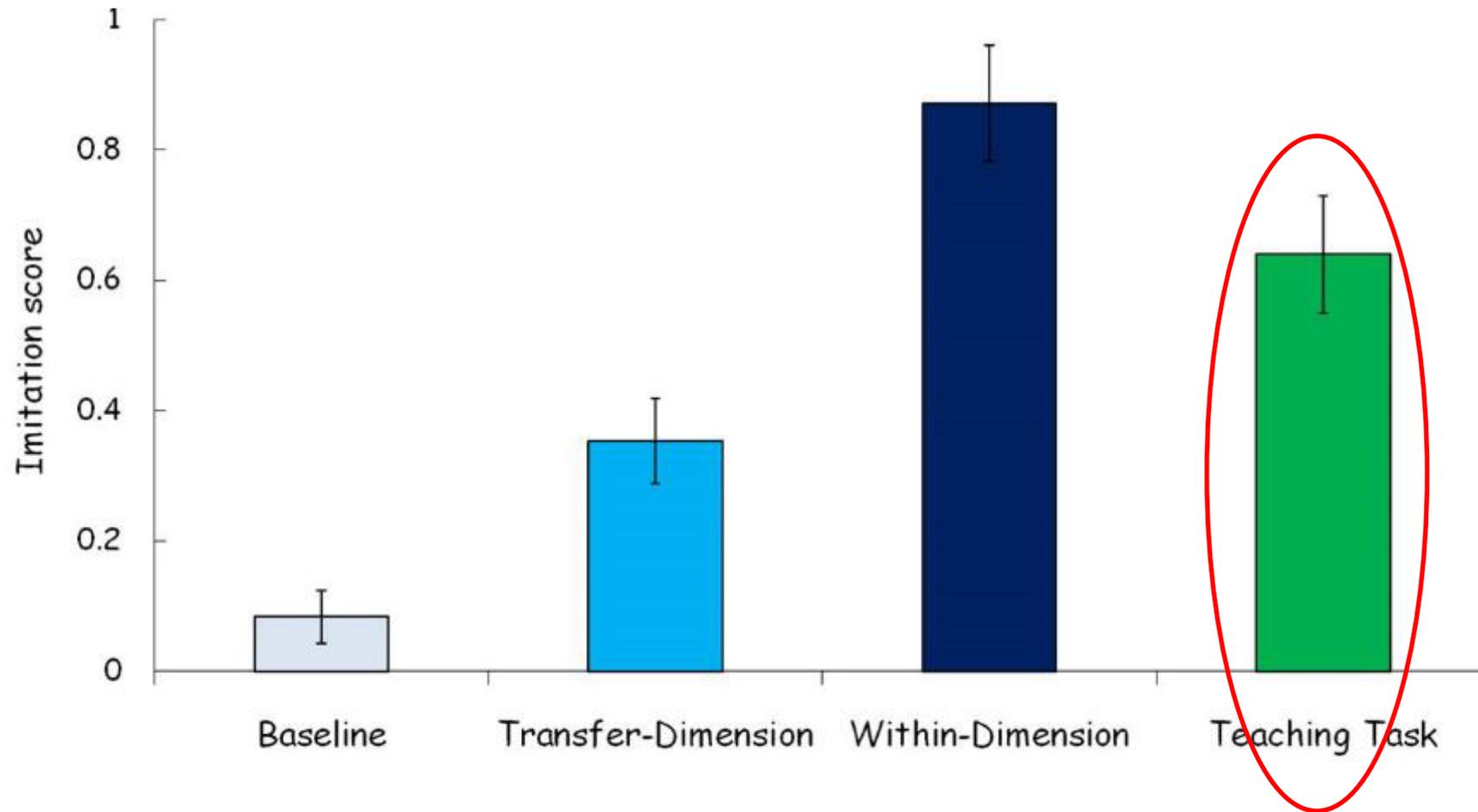
- The Transfer Deficit
 - Children 0-3 years can learn from screens, but learn less than they do face-to-face
 - Overcoming the Transfer Deficit

The Child: Learning from Touchscreens



- Research with 15-month-olds shows that when parents actively engage their children while using a touchscreen, the **toddlers are 22 times more likely** to transfer learning from the device to a real object (Zack et al., 2010).
- Learning can be enhanced when there is a high level of high-quality interaction between parent and child (Zack & Barr, 2016).

Transfer of Learning



Parent-Child Interactions Matter



Diverse

What does a cow say?	N
Moo	N
And there's another cow	N
Look (child's name)	N
This is how I make him go moo	N
And look - 1 cow, 2 cows	N
I know, it's so funny	N
Can we make him go moo?	N

Repetitive

Look at this	N
Look at that	R
Look at that	R
It's a screen	N
Doesn't that look like the other toy?	N
Doesn't it look like the other toy?	R
It's yellow	N
Looks like the other toy, doesn't it?	R

(adapted from Reese & Fivush, 1993)



- Parental Scaffolding—what is it?
 - Rich verbal input
 - Emotional support, warmth and responsiveness
 - Structured teaching

The **C**ontent Matters



- 1. High quality** children's **educational** programming does **NOT** correlate with negative impacts to the child.
- 2. Low quality** children's **entertainment** programming, or adult-oriented programming **DOES** correlate with negative impacts to the child.



Language-Promoting Indicators:

- Onscreen characters speak directly to the child
- Characters actively elicit participation
- Characters provide opportunities to respond (ie, pauses)
- Characters label objects

Beginning at about 2 years, quality TV—well-designed, age-appropriate programs with specific educational goals—can provide an additional route to early language and literacy for children (Linebarger et al., 2010).

Television Content: Executive Functioning



- Exposure to fast-paced programs, such as *SpongeBob SquarePants* is shown to have a negative effect on 4-year-olds' executive functioning.
- Children who watched the fast-paced TV cartoon performed significantly worse on the executive function tasks than children in the other two groups.
- Programs that are fast-paced *and* fantastical have a more negative effect on executive functioning than fast-paced shows that are more realistic in nature.

The **Context** Matters



Joint Media Engagement supports children's learning.

Context: Joint Media Engagement



- **TV & Video:** 84% of parents report that they sometimes co-view with infants and toddlers

BUT...

- **Apps:** Only 63% say that they sometimes co-use apps

The **Context** Matters



Background media is NOT benign.



Background TV:

- **Is on almost all the time in 42% of homes.**
- Is typically not child-directed and mostly incomprehensible to young children.
- Interferes in children's play and learning
- Is associated with poorer parent–child interaction



- Children who had experience Skype or “Facetime-ing” another adult preferred and recognized that adult when they met in real-life.
- Children also learned new words and patterns via Facetime/Skype
- Learning occurred only when children talked to a partner who responded to them in real-time

(Myers et al., 2016, Roseberry et al., 2014)



ZERO TO THREE
Early connections last a lifetime

Selecting Quality Content: E-AIMS



E-AIMS

- **Engaging**: Children find the screen content interesting and fun. The media should have a purpose—to focus the child’s attention on learning a particular idea or skill— with few built-in distractions.
- **Actively Involved**: The screen experience is “minds-on” and designed to activate your child’s involvement in some way — like ask your child to do respond to something new, or do something mentally challenging.
- **Meaningful**: Screen content that is relevant to the child’s life, like familiar settings and situations (taking a bath, going to the park, petting a neighborhood dog). Introducing new information in a familiar setting helps children learn.
- **Social**: Social connection happens when parents play/explore/talk about media experiences with their children or when a school-age child plays in a building game along with other players.

(Hirsh-Pasek et al., 2015)

Is my child Engaged?



Consider:

- Is there a learning goal or story as part of the screen experience?
- Is there lots of extra interactivity that doesn't relate to the learning goal?

Implications:

- **Choose content (TV , apps, e-books) carefully.**
- **Look for screen experiences that are engaging, but focused on a learning goal and without lots of built-in distractions.**

Is my child Actively-Involved?



Consider:

- Does she look like she's really thinking about, and participating in, the content?
- Is the content or game so familiar that he is on "autopilot"?
- Is my child being challenged (but not frustrated) by this experience?

Implications

- **Focus on the story when sharing e-books with children to build a more actively involved (minds-on) experience.**
- **Look for screen experiences that offer age-appropriate challenges.**

Is the content Meaningful?



Consider:

- Does the content of this experience reflect my child's everyday life and things she is familiar with?
- Does the content use my child's current knowledge to build up to more complex ideas and skills?
- Does the content of this experience include lots of imaginary or complex elements, like places and objects that your child isn't familiar with ?

Implications

- **Seek out resources that point to high-quality media content for children.**
- **Choose screen experiences that feature children's everyday objects, experiences, and routines.**
- **Help children make the connection between what they see on a screen and the real world.**

Is there Social interaction?



Consider:

- Does this experience encourage my child to participate by speaking or responding within the game?
- Does this experience encourage my child to interact with me as we play together?

Implications

- **Make screen time a language-rich, socially-interactive experience.**
- **Be creative during video chat.**
- **Look for apps that encourage social interaction around the content.**



Toddler Teasers

Will the app **ENGAGE** the child?

Will the app **ACTIVELY INVOLVE** the child?

Is the content **MEANINGFUL**?

Is the content **SOCIAL**?

Resources



- Common Sense Media: www.commonensemedia.org
- PBS: www.pbs.org
- Fred Rogers Center: <https://www.fredrogerscenter.org/>



ZERO to THREE
Early connections last a lifetime

Technoference



Adults' Use of Screens



- Take a guess on how many hours a day parents report using screens (phones, computers, tablets, television).

9 hours, 22 minutes per day

- Now take a guess on how many parents reported that they were modeling good media habits for their kids.

78 percent

<https://www.commonsensemedia.org/research/the-common-sense-census-plugged-in-parents-of-tweens-and-teens-2016>



- Missed opportunities for valuable social interaction with children
- Can result in an increase in negative child behaviors and angry, punitive responses from parents (Radesky et al., 2014)
- Survey: About half of parents said technology typically interrupted parent-child time 3 or more times a day. (McDaniel & Radesky, 2017)

Impact of Parents' Screen Use: “Technoference”



- When children were ~6 years old, parent-child pairs were videotaped while mothers asked their child to try familiar and unfamiliar foods.
- During the protocol, 23.1% of mothers spontaneously used a mobile device.
- Mothers who used devices initiated **fewer verbal and nonverbal interactions** with their children than mothers who did not use a device.

Maternal Mobile Device Use During a Structured Parent–Child Interaction Task | Available from: https://www.researchgate.net/publication/268690385_Maternal_Mobile_Device_Use_During_a_Structured_Parent-Child_Interaction_Task [accessed Feb 07 2018].



- Mothers were asked to teach their 2-year-olds two words, 1 at a time.
- One teaching period was interrupted by a cell phone call to the mother.
- Children learned the word when the teaching was **not** interrupted and did not learn the word when teaching **was** interrupted.



- Observations on **Playgrounds** (Hiniker et al., 2015)
 - About 35% of caregivers spent 20% or more of the time on phone
 - When child tried to get attention of caregiver on phone...
 - 56% of caregivers NEVER responded to child
 - When child tried to get attention of caregiver distracted in some other way...
 - Only 11% never responded



ZERO to THREE
Early connections last a lifetime

Implications

So What?



- What do you see as the key implications for the families you serve? Your community?
- What actions can you take with the parents in your program setting to support a healthier balance of screen use in children's lives?



Evidence-Informed Implications for Family Routines



- **Limit screen time use** (both for parents and children) to make sure children have a balanced “media diet” and plenty of time exploring the real, 3-D world.
- **Select engaging, high-quality media.** Talk about what is happening on the screen and what the child is learning. Help children bridge the gap to the 3D world.
- **Turn off the TV in the background** and when no one is watching.
- **Avoid keeping screens in child’s bedroom** or using them at bedtime.
- Some studies have suggested having a **fair home policy or family media plan** from a very early age can be effective.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4491159/>,

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4785319/>



ZERO to THREE
Early connections last a lifetime

Wrapping Up

Our Recommendations



The overall value of children's media depends on more than just the media. We need to consider...

The 3C's

- Child,
- Content, and
- Context

(Guernsey, 2014; Hirsh-Pasek et al., 2015)

Educational media should include high-quality content and support the ways we know children learn best. It should be...

E-AIMS

- Engaging
- Actively Involved
- Meaningful
- Social



**SCREEN
SENSE**

What the Research Says About the Impact of Media on Children Aged 0-3 Years Old



**SCREEN
SENSE**

Free Screen Sense Webinar: **All the Need-to-Know Research** on Screens for Children Under 5



**SCREEN
SENSE**

Choosing Media Content for Young Children Using the E-AIMS Model



**SCREEN
SENSE**

**FIVE
TIPS**

to Make the Most of **Video Chats**



**SCREEN
SENSE**

YOUNG CHILDREN AND SCREENS: Putting Parents in the Driver's Seat



**SCREEN
SENSE**





Questions?

Thank You!



Rebecca Parlakian

Senior Director of Programs, ZERO TO THREE

rparlakian@zerotothree.org



@RParlakian
@ZEROTOTHREE

www.zerotothree.org/screensense



Thank You!



Jodi Whiteman

Senior Advisor, Public Consulting Group

jwhiteman@pcgus.com



www.linkedin.com/in/jodi-whiteman

www.pcgus.com

