

# Key Issues in Early Childhood & Technology

---

## *Identifying Powerful Ideas and Transformational Approaches*

Chip Donohue, PhD

**erikson**  
**TEC Center**  
Technology in Early Childhood



Exploring Key Issues  
in Early Childhood and  
Technology

Evolving Perspectives and Innovative Approaches

Edited by Chip Donohue



You are invited  
to a dinner party

*Imagine yourself sitting at this distinguished table and how you might contribute to the conversation, as a researcher, teacher, media professional, activist, student, parent, or caregiver...*

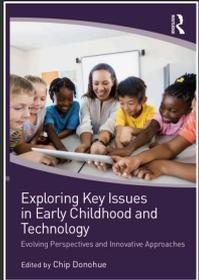
*Interesting projects might emerge for how families and communities can create the better digital environment we deserve. What could be more important to our democracy than the environment of ideas our children are raised in?*

Milton Chen  
*George Lucas Educational Foundation*

# Thoughts from the Thought Leaders

## An imagined conversation

- Key issues
- Promising practices
- Groundbreaking research
- Evolving perspectives
- Transformational approaches
- What needs to be transformed?

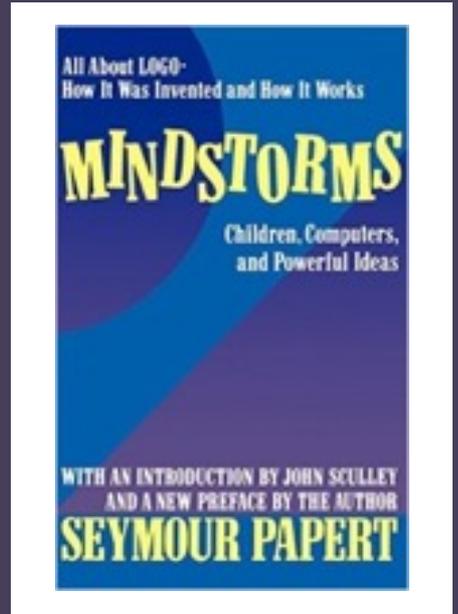
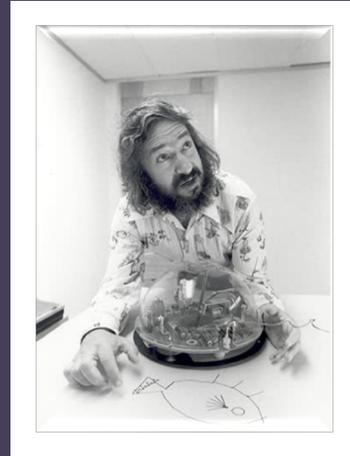


# In search of powerful ideas

---

*When one enters a new domain of knowledge, one initially encounters a crowd of new ideas. Good learners are able to pick out those which are powerful.*

Seymour Papert, 1980





# “Ubiquitous interactivity”

---

*The concept of “screen time” has become meaningless in a world where screens bring entertainment, learning, discovery, communication, play, creation and more.*

David Kleeman  
*Dubit*

5 Things that Haven’t Changed (Much)



*Designed for  
connections*

Childhood 2040 - A Wishlist

*Mobile technology has made us the first generation of parents to be physically far from our grown children, but we have the capacity to be psychologically closer.*

Warren Buckleitner  
*Dust or Magic Institute & Fred Rogers Center*



Children's  
**TECHNOLOGY**  
REVIEW

# Parenting in the digital age

*...without conscious reflection about parents' own relationships with their mobile devices, it will be difficult to ask parents to become the media mentors for their children we hope they will be.*

Dr. Jenny Radesky

University of Michigan Medical School & AAP

Mobile Media and Parent-Child Interaction



# Families matter

*Parents are turning to family and friends, teachers, and recommendations from schools for guidance in navigating media. Educators, media developers, and community institutions have a responsibility to help parents access quality resources, use them wisely, and set plans for media use.*

M. Elena Lopez  
*Global Family Research Project*

No Surprise: Families Matter in Digital-Based Learning

Next Generation  
Family Engagement  
Engaging Families to  
Transform Education



## A mission for media mentors

*With ideas and guidance from media mentors, educators and parents can learn to take advantage of children's natural curiosity to build their critical thinking skills about all the message they see and hear.*

Lisa Guernsey

*Learning Technologies Project, New America*



**A Mission for Media Mentors: Creating Critical Thinkers**



## Possibilities, access & equity

*Kids' enthusiasm for digital activities presents a great 'hook' for teachers and busy parents to manage their responsibilities, but if educators and parents themselves do not become technically proficient, the full range of digital possibilities—and the access to new technological tools, will effectively be reserved for the more privileged.*

Michael H. Levine  
Noggin



• [Digesting the iScreen Decade:  
What Should Media Makers, Policymakers and Philanthropy Do Next?](#)

# Children's rights

---

*...children increasingly see digital technologies – along with the digital literacy, agency and privacy to use them – as their preferred (and sometimes only) way to access their fundamental human rights across the board.*

Sonia Livingstone  
*London School of Economics, UK*





## #DesigningForChildrensRights

---

*Designers must be keenly aware of the physical, cognitive, social and emotional development of the children they are designing for.*

Shuli Gilutz  
*Tel-Aviv University, Israel*



### **DESIGNING** *for* **CHILDREN** **GUIDE**

INTEGRATING CHILDREN'S RIGHTS & ETHICS INTO THE  
DESIGN PROCESS

# *What children's media producers need to know*

*...guidance to the producers, and pipeline and platform owners about both their responsibilities. and the opportunities they have, to contribute to our nation's children and the future of this country.*

Lewis Bernstein  
*Sesame Workshop (Retired)*



Thursday, January 19 • 7:30 pm

## **The Hidden Power of Sesame Street: An Evening with Lewis Bernstein**

Former Executive Vice President of Education Research and Outreach for Sesame Street Workshop

How did *Sesame Street* shape the values of generations of American children? What influences are shaping the values of children today? What can we expect in the near future from this Emmy Award-winning influence on children's intellectual, social, emotional and moral lives?

Bruce Museum, 1 Museum Drive, \$15 in advance, \$20 at the door

**Register at [JCCGreenwich.org](http://JCCGreenwich.org) or 203-552-1818**



Media and Marriage: “From This Day Forward, for Better or Worse”

## Children and Families in the Digital Age

Learning Together in a Media Saturated Culture



edited by  
Elisabeth Gee, Lori M. Takeuchi,  
and Ellen Wartella



## Helpful tools

*We may find that the affordances of smartphones and tablets are especially helpful learning tools for young children.*

Ellen Wartella  
*Center on Media and Human  
Development at Northwestern*

Smartphones and Tablets and Kids – Oh My, Oh My.

## Seeing is believing

*Imagine what would happen if all children read books, saw television programs, watched movies, and played games that presented positive portrayals of people who look like them.*

Kevin A. Clark  
Center for Digital Media and  
Innovation at George Mason

Seeing is Believing:  
Racial Diversity in Children's Media



# When tech disappears

*Designing for young children in a world of ambient computing provides a wonderful opportunity to explore the ways in which technology can provide fun, pleasure and play.*

Lydia Plowman

University of Edinburgh, Scotland

When the Technology Disappears





MakEY

## Digitizing childhood

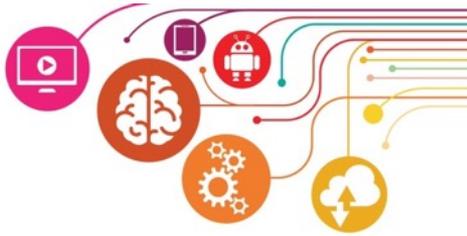
*If we view digital literacy as a social practice in which children engage in meaning-making practices in order to express themselves and communicate with others, then it seems appropriate to extend the modes and media available for this to include new technologies, such as digital fabrication tools.*

Jackie Marsh

University of Sheffield, UK

Makerspaces in the Early Years:  
Enhancing Digital Literacy and Creativity





Early Childhood Australia  
Statement on young children  
and digital technologies



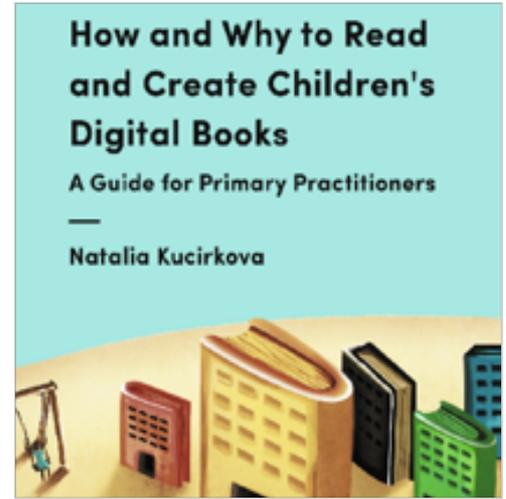
# Digital play

*By viewing young children's play as a form of meaning-making within digital contexts I was interested in how children and teachers could activity engage in problem-solving and critical thinking with and about digital technologies relative to children's play interests.*

Susan Edwards  
Australian Catholic University

Digital Play

*The key benefits of personalized education centre around giving children choices, motivating them to learn and fostering their curiosity, wonder and enjoyment of learning.*



*If we used technology for motivational ends only, we might support children's learning interests but not necessarily their learning.*

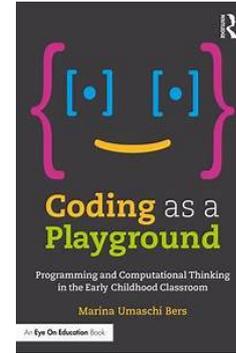
Natalia Kucirkova  
*University of Stavanger, Norway*

# Coding As Another Language

*Coding as Another Language (CAL) proposes that programming, as a literacy, engages new ways of thinking and new ways of communicating and expressing ideas – not only new ways of problem solving.*

*From a cognitive perspective, there is sequencing and problem-solving, but this approach deprives children of the most powerful impact of literacy: expression of their own voices through the making of meaningful artifacts.*

Marina Umaschi Bers  
DevTech Research Group, Tufts University



# Our digital environment

*Perhaps it's time to acknowledge that the digital environment is now as immersive, tangible, and vital to life as the physical environment. Creating a sustainable future is becoming as urgent for our children's digital lives as the crises threatening our ecosystems, where extreme weather, air and water pollution, and climate change are on the rise. As Internet hacking, fake news, and divisive social media have shown, the climate is changing for our digital world, as well.*

Milton Chen  
*George Lucas Educational Foundation*





*“Imagining something may be the first step in making it happen, but it takes the real time and real efforts of real people to learn things, make things, turn thoughts into deeds or visions into inventions.”*

—Fred Rogers, *The World According to Mister Rogers*,  
Hyperion, New York, copyright 2003,  
Family Communications, Inc., pg. 99.



# Be fearlessly authentic

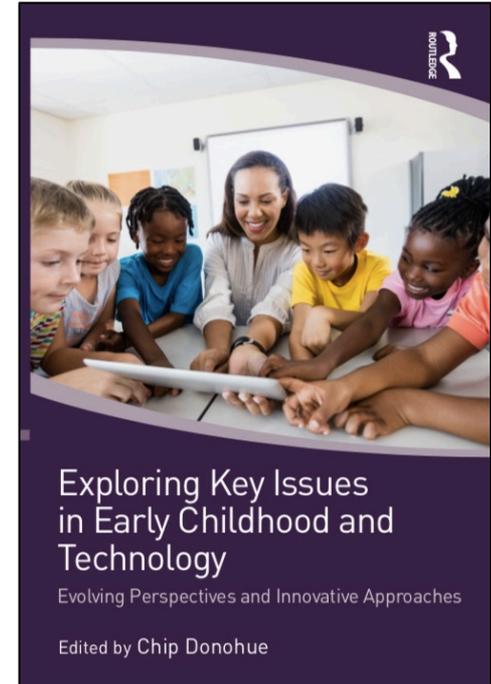
*Fred Rogers was a mentor and role model to parents and caregivers about the importance of bringing every part of who you are into your interactions and relationships with a child.*

Chip Donohue

Fred Rogers was Mister Rogers.  
Mister Rogers was Fred Rogers.

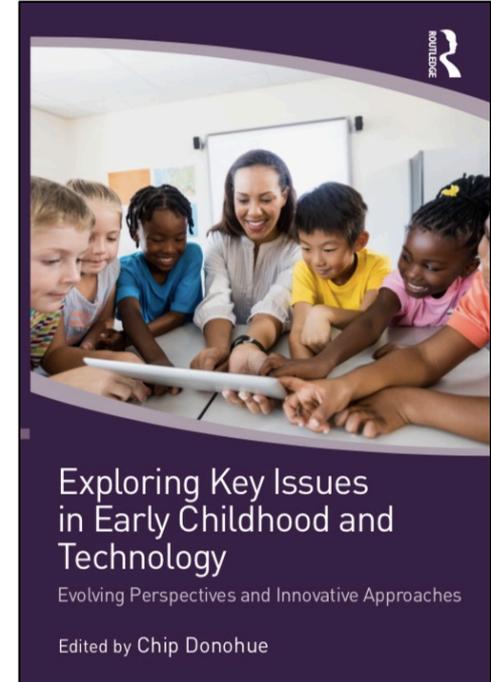
# 10 Powerful Ideas & Transformational Practices

- 1. New tools for children and adults –**  
*Communication, collaboration, social-emotional development, teaching, learning, making*
- 2. Old theory informs the use of new tools –**  
*Guidance from Montessori, Piaget, Vygotsky, Erikson, Skinner, Papert, Gardner*
- 3. Relationships - Use *interactive* media that invites and encourages *interactions* with others**
- 4. Early childhood “essentials” are always essential**
- 5. 3Cs – Content, Context, Child**



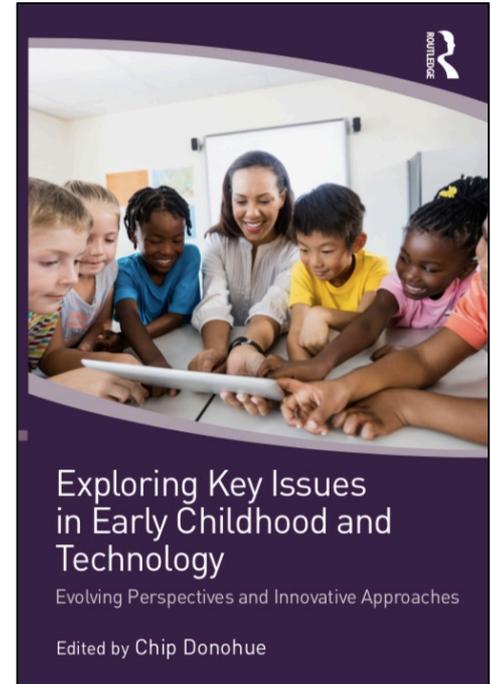
# 10 Powerful Ideas & Transformational Practices

6. **Creating media**
7. **Digital storytelling**
8. **Coding as a literacy**
9. **Technology-mediated family engagement & nudges**
10. **Grownups as media mentors**



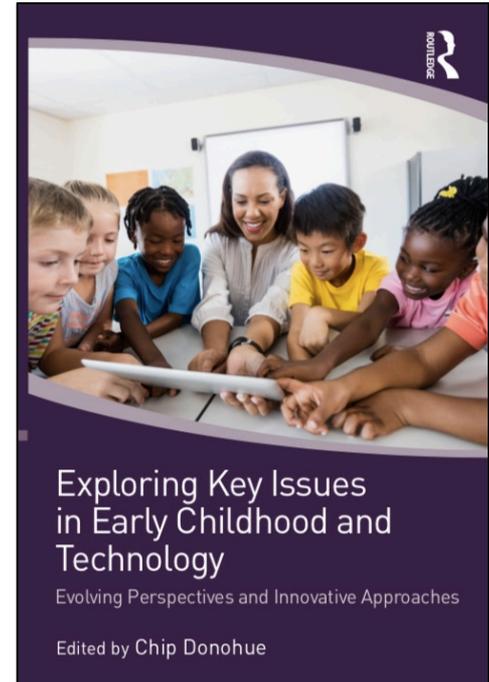
# 10 Practices in Need of Transformation

1. **Equity** – *access and the digital use divide*
2. **Diversity gaps** – *characters, context and use*
3. **Children's rights** – *in the digital environment*
4. **Digital citizenship** – *cyber safety, online privacy, datafication, advertising*
5. **Ethics** – *more developmentally-informed and child-centered design – less persuasive design*



# 10 Practices in Need of Transformation

- 6. Technology designed for adults** – *is immediately in children's little hands*
- 7. Adult digital literacy** – *conscious reflection on our own media behaviors distractions, engagement and presence*
- 8. Research agenda and research literacy**
- 9. Evidence-based classroom practices** – *AI, VR, Coding, Computational Thinking*
- 10. Teacher preparation in the digital age**



# In Search of... Research-based Practices

- What do we know about evidenced-based and developmentally-informed benefits or harms?
- How does 50 years of children's television research inform our understanding of children's use of digital devices?
- What are the implications of children using technology tools that were designed for adults – iPhone, iPad, Alexa?
- What do we need to know about “digital well-being” to help for young children and their families “live well with media”

# *Did we pass the Seymour test?*

- ✓ New domains of knowledge
- ✓ Encounters with thought leaders
- ✓ Crowd(sourced) new ideas
- ✓ *“Good learners are able to pick out those which are powerful.”*



Marina Bers reflecting on her mentor, Seymour Papert



*What did you learn from  
our dinner conversations?*

*What table(s) will you  
take a place at?*

*What powerful ideas and  
innovative approaches  
will you add to the  
conversation?*

*What will you do to  
develop your voice to  
share your thoughts as a  
thought leader?*

# *A final nudge*

*Love is at the root of everything – all learning, all parenting, all relationships. Love or the lack of it. And what we see and hear on the screen is part of who we become.*

Fred Rogers  
*Media Mentor*

