



Technology in the Early Years: 4M Roles for Digital Age Educators

by Chip Donohue

When the integration of technology and interactive media in early childhood programs is built upon solid developmental foundations, and early childhood professionals are aware of both the challenges and the opportunities, educators are positioned to improve program quality by intentionally leveraging the potential of technology and media for the benefit of every child.

NAEYC & Fred Rogers Center Joint
Position Statement (2012)

It can be challenging to be an analog-age educator who welcomes digital-age children into your classroom every day. Technology tools and digital media are changing so fast that making appropriate and intentional choices can feel overwhelming to many early childhood educators.

In a screen-saturated world, educators need to know how to best manage how much children watch, what they watch,



Chip Donohue, PhD, is the Dean of Distance Learning and Continuing Education and the Director of the TEC Center at Erikson Institute in Chicago. He is a Senior Fellow and Advisor of the Fred Rogers Center for Early Learning and

Children's Media at Saint Vincent College. Chip is the editor of a new book, *Technology and Digital Media in the Early Years: Tools for Teaching and Learning* (Routledge, 2014).

and what they do while using screens.

These decisions require a new literacy for educators in formal and informal settings — digital media literacy. This digital-age literacy includes attitudes, knowledge, experiences, and competencies that lead to fluency with digital devices and media for teaching and learning in schools, early childhood programs, children's libraries, museums, and out-of-school-time programs.

Becoming fluent with digital media requires innovative and hands-on approaches to pre-service teacher education and new pathways to professional development to assure that educators can appropriately and intentionally select, use, integrate and evaluate technology tools that support healthy child development and enhance early learning for young children.

The analog adults who work with and on behalf of young children today were not born into the digital age, but the children are growing up in a digital world with new tools that create exciting opportunities for learning if they have digitally-literate adults who are media managers, mediators, mentors, and makers. The path to digital media literacy and effective, appropriate, and intentional use includes 3Cs, 5Es, and 4Ms. Let me explain.

The 3Cs

Lisa Guernsey, Director of the Early Education Initiative and the Learning Technologies Project at New America, first described the 3Cs of children's media in the preface to her book, *Screen Time: How Electronic Media — From Baby Videos to Educational Software — Affects Your Young Child* (2007, xv). As you think about selecting and using technology tools and digital media, consider these 3Cs:

- **Content:** How does this help children engage, express, imagine, or explore?
- **Context:** How does it complement, and not interrupt, children's natural play?
- **The individual Child:** How do we choose the right tech tools and experiences for each child's needs, abilities, interests, and developmental stage?

The 5Es

In a recent blog for *Forbes* Magazine, "It's Time to Rethink Our Use of Technology in Schools," Nick Morrison (2014) lists five action words for selecting, using, and integrating technology and digital media in the classroom. The 5 "E" words were originally identified by Martin Blows,

formerly a director of online learning at the United Kingdom's National College for School Leadership (Blows, Wray & Butchinsky, 1989), and they offer a helpful way of considering the value of a technology experience and the level of a child's engagement. Listed from shallow to deep, the 5Es are:

- **Exchange:** Swap traditional ways of doing things with technology
- **Enrich:** Engage learners with a richer mix of technology
- **Enhance:** Encourage deeper learning through the use of technology
- **Extend:** Change the content, process, and location of learning so children can take their learning further
- **Empower:** Enable children to take control of their own learning

The 4Ms

That brings us to the 4Ms for digital-age educators who need to be media **Managers, Mediators, Mentors, and Makers**. When considering if, when, how, and why to use technology with young children, 4M educators need to look beyond the screens, devices, digital media, and interactive technology to remind themselves that any choice they make needs to be based on their knowledge of child development, early learning, and developmentally appropriate practices and always in the context of interactions and relationships that support healthy social-emotional development, prosocial behaviors, and create connections between a young child, caring adults, and peers.

I'm using the 4Ms to describe best practices for digital-age teaching, but as you review the five tips for media managers, mediators, mentors, and makers you may find these are good teaching practices whether the child is engaged

with technology or in more traditional learning activities in your classroom.

■ 5 Tips for Mindful Media Managers

1. **Do your homework.** Your digital media literacy matters, so consider your attitudes, experiences, knowledge and competencies, and what you need to do to become fluent.
2. **Be intentional.** Use DAP and the Position Statement to select, use, integrate, and evaluate technology tools.
3. **Curate content.** The quality of the content matters, so choose only the best for young children and be a trusted source of recommendations for parents.
4. **Limit tech time.** Observe the child, consider the content and the context and the level of engagement when deciding how much is enough and when it's time to guide the child to another activity or opportunity for interactions.
5. **Integrate technology.** With mobile devices, the days of the computer lab or the desktop computer in the corner are coming to an end, so think about how to integrate technology across the curriculum and throughout the day. Take the technology to where children's activities are happening and their ideas can be enhanced.

■ 5 Tips for Mindful Media Mediators

1. **Be a great digital media playmate and co-explorer.** Vygotsky taught us about scaffolding and the value for children learning to have a "more knowledgeable other" who can affirm, encourage, and provide a gentle nudge forward.
2. **Be tuned-in and attentive, keep it interactive, stay engaged.** Whether

the child is using technology or is involved with other materials and activities in the classroom.

3. **Match the tools and content to the individual child.** Draw on your knowledge of child development and DAP to match the right tool with the child's needs, interests, abilities, and your learning goals.
4. **Use technology to let children do something that they couldn't do without it.** Electronic flashcards don't take advantage of the interactive features of the new digital devices. Try open-ended storytelling apps that can include photos, videos, the child's recorded voice, and more.
5. **Plan for fun offline.** Digital devices have on/off switches and that means there is a state of 'off' and a state of 'on'; help children understand that technology tools are 'on' when they're being used appropriately, and 'off' when there are offline and off-screen activities instead. Foreshadow the 'state of off' with questions like: What are we going to do when we turn it off? How can we learn more about this? What can we do to keep the game/activity going when we're not using technology?

■ 5 Tips for Media Mentors

1. **Be a good digital media role model and enthusiastic tour guide.** Follow the children and be a wonderful media example on which they can model their behavior. Provide tips to parents for promoting a healthy media diet and positive family media ecology at home.
2. **Focus on relationships.** Emphasize technology tools and use that encourage prosocial behaviors, interactions, relationships, and joint engagement.

3. Promote digital media literacy. For you, the children, and the parents and families.

4. Give children choices and control. A well-established principle of child development and early childhood education that fits beautifully in the digital age.

5. Help children progress from media consumers to creators. We all have times where we're consumers of media, but in the 21st century children need to become media creators and determine how best to use the tools for their own learning.

■ 5 Tips for Media Makers

1. Be a maker. Explore ways to make media so that you can model and mentor children as media creators.

2. Nudge yourself from an analog to a digital teacher. Move on the continuum from consumer to adopter to adapter to creator.

3. Start with familiar technology. Take digital photos, videos, and record audio; use open-ended storytelling apps.

4. Create maker spaces in your classroom. Encourage tinkerer scientists and inquiry learning.

5. Have a play. Attend or organize an 'appy hour' or tech play group with other educators. Join the maker movement.

Analog Skills for Digital-Age Curation

As 4M educators we all have to acknowledge that we were not born digital, but that we need to become more digital to support 21st century teaching and learning that promotes school readiness and success. Our analog knowledge, skills, experience, and passion as educators are the foundation for digital-age curation to select, use, integrate, and evaluate tools and media for young children: You have a foundation to build upon.

■ Reflect on what you know about child development and early learning.

■ Apply Developmentally Appropriate Practice.

■ Follow the principles and guidelines from the NAEYC/FRC Joint Position Statement.

■ Identify your own best practices with digital technology and media.

■ Become a connected educator who uses technology tools to communicate, collaborate, and learn with and from other 4M educators interested in appropriate and intentional use of technology with young children.

"While I'm struggling along with everyone else to find ways that early childhood professionals can use technology appropriately, I try to keep in mind something else I learned from Fred Rogers: 'No matter how helpful computers are as tools (and of course they can be very helpful tools), they don't begin to compare in significance to the teacher-child relationship, which is human and mutual. A computer can help you learn to spell HUG, but it can never know the risk or the joy or actually giving or receiving one. I keep that in mind so I myself don't get so fascinated by what the technology can do that I forget what it can't do.'" (Hedda Sharapan, in Donohue, 2015, p. 19)



NAEYC & Fred Rogers Center for Early Learning and Children's Media at Saint Vincent College, Joint Position Statement. (2012). *Technology and Interactive Media as Tools in Early Childhood Programs Serving Children from Birth through Age 8*

■ Key Messages

■ Examples of Effective Practice

■ Technology that Supports Early Learning

- *Digital Story Helps Dual Language Learner Connect with Classmates*
- *Virtual Tour of the Titanic Helps a Kindergartner Make Social Connections and More*
- *Supporting Family Involvement and Readiness for Migrant Children*

Learn more . . . www.naeyc.org/content/technology-and-young-children

Selected Resources for 4M Educators

Child Learning & Development Center,
Pacific University College of Education,
Tech Tools Site
<http://fg.ed.pacificu.edu/cldc/techtools.html>

Colorado Department of Education,
Results Matter Video Library — iPads in Early Childhood
www.cde.state.co.us/resultsmatter/rmvideoseris_ipadsinearlychildhood

Common Sense Media,
Early Connections: A Parent Education

Toolkit for Early Childhood Providers
www.common sense media.org/educators/early-connections

Early Childhood Investigations
Webinars
www.esbyfs.com/early-childhood-investigations-webinars

Fred Rogers Center for Early Learning
and Children's Media at Saint Vincent
College
www.fredrogerscenter.org

HITN Early Learning Collaborative
<http://earlylearningcollaborative.org>

PAEYC Digital Media Literacy page
www.paeyc.org/digital-media-literacy

TEC Center at Erikson Institute
www.teccenter.erikson.edu

Technology and Young Children Interest
Forum
www.techandyoungchildren.org/index.shtml

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www.forbes.com/sites/nickmorrison/

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Recommended Reading for 4M Educators

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.

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