

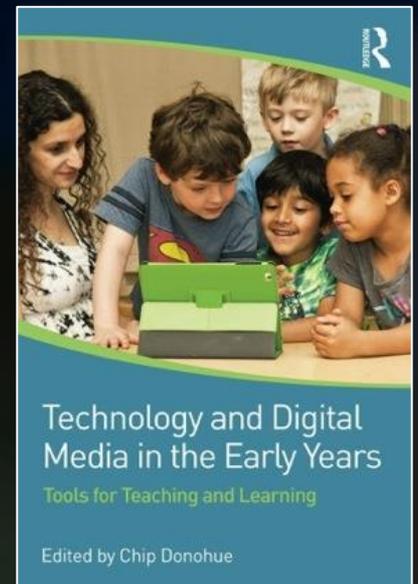


Technology and Digital Media in the Early Years: *Big Ideas, Best Practices and Future Directions*

Chip Donohue, PhD
TEC Center Director
Erikson Institute

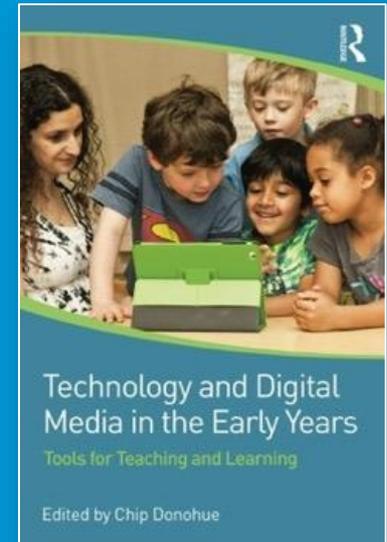
*with big ideas from
25 contributing authors*

erikson
TEC Center
Technology in Early Childhood

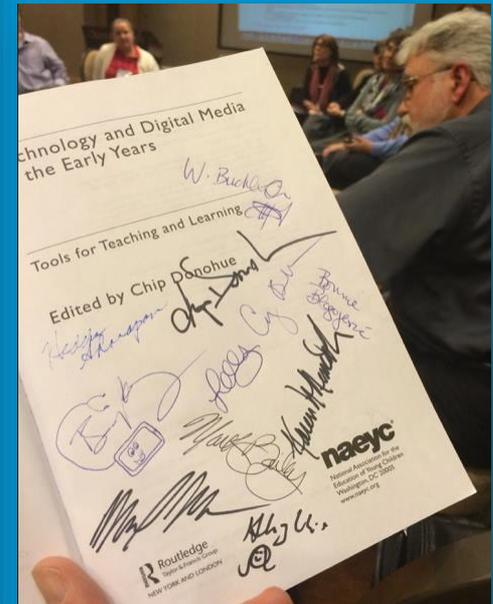


The 25 Contributing Authors

- Ed Greene
- David Kleeman
- Alice Wilder
- Hedda Sharapan
- Roberta Schomburg
- Warren Buckleitner
- Michael Robb
- Alexis Lauricella
- Faith Rogow
- Lisa Guernsey
- Michael Levine
- Karen N. Nemeth
- Howard P. Parette
- Craig Blum
- Kate Highfield
- Mark Baily
- Bonnie Blagojevic
- Brian Puerling
- Angela Fowler
- Tamara Kaldor
- Luisa M. Cotto
- Cen Campbell
- Carisa Kluver
- Amanda Armstrong
- Chip Donohue

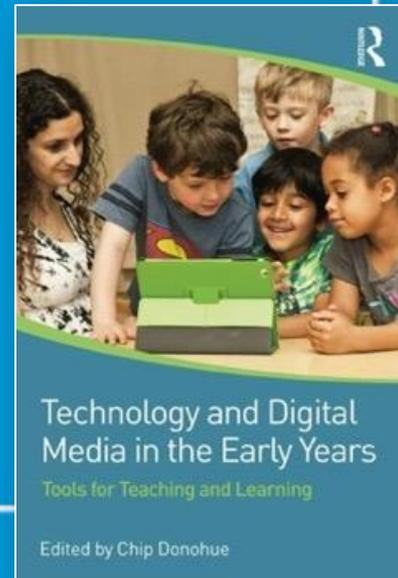


Contributing Authors at NAEYC



Features

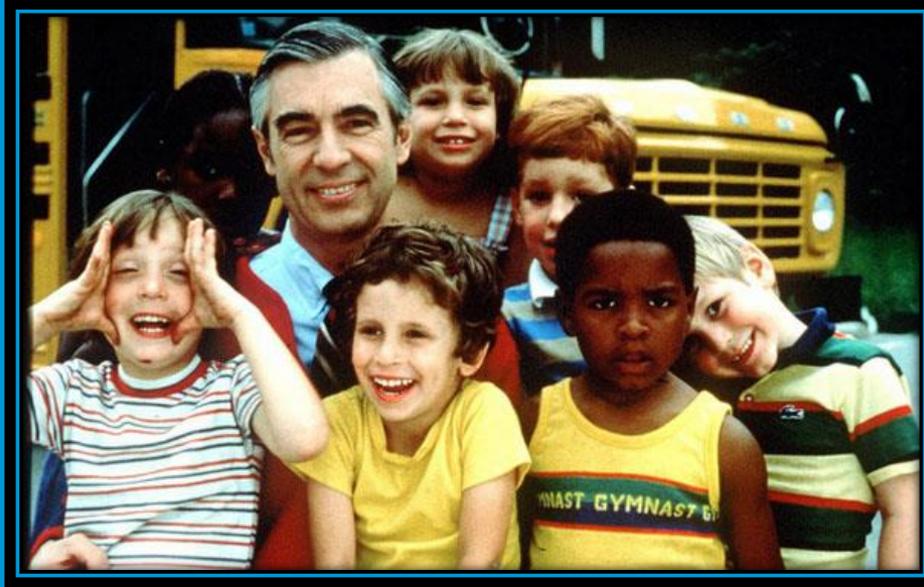
- 25 contributing authors who are technology in the early years thought leaders and innovators
- Alignment with the NAAEYC and Fred Rogers Center Joint Position Statement
- Case studies, best practices, research
- Teacher Takeaways
- Learn more...



Inspired by Fred Rogers

- Many of the contributing authors were inspired by the legacy of Fred Rogers and his approach to the technology of his day.
- Like Fred, they always consider what is best for the child's development and learning first, and share a commitment to using technology as a tool to support relationships, social-emotional development, and pro-social behaviors.

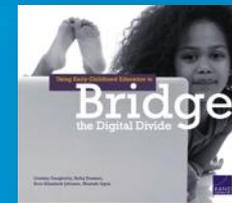




Follow Fred's lead...Use tech "with" rather than "instead of"
We have to help give children tools, building blocks for active play. And the computer is one of those building blocks. No computer will ever take the place of wooden toys or building blocks. But that doesn't mean they have to be mutually exclusive.

The perfect storm

- *Zero to Three, Setting the Record Straight*
- RAND Corporation Reports
- Common Sense Media, *Early Connections: A Parent Education Toolkit for Early Childhood Providers*
- *Technology and Digital Media in the Early Years: Tools for Teaching and Learning*
- New ideas about “screen time” in the Headlines
 - *Common Sense, Science-Based Advice on Toddler Screen Time. Finally!*
 - *Yes, Your Toddler Can Watch TV: The New Rules on Screen Time*
 - *Kids and Screen Time: What Does the Research Say?*



The perfect storm

It's not just how many words, but the quality of those words and the relationships in each child's life that makes a difference.

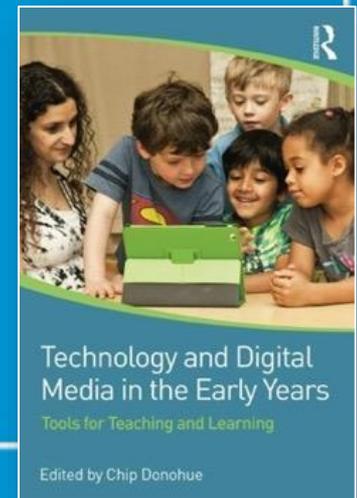
New research

- Quality of Words, Not Quantity, Is Crucial to Language Skills, Study Finds
- For Toddlers It's Quality Not Quantity of Screen Time
- What Really Counts in the Word Gap Count?
- Is E-Reading to Your Toddler Story Time, or Simply Screen Time?
- Skype Me: Socially Contingent Interactions Help Toddlers Learn Language

Themes, Big Ideas, Best Practices

What matters most?

- The Position Statement, FRC Framework, research
- Relationships
- Digital media literacy
- Lisa Guernsey's 3Cs – *Content, Context and Child*
- Child development, DAP and ECE “essentials”
- Creating media
- Learning beyond the screen
- Tools for family engagement



From the Joint Position Statement

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.



Relationships matter

- Young children learn best in the context of interactions and relationships with attentive, responsive, caring adults
- Co-viewing < joint engagement with media – using media together leads to more learning
- Media use to encourage pro-social behaviors and promote social/emotional development
- Use technology as a tool to strengthen relationships with adults and peers



Joint engagement matters



Digital media literacy matters

- Attitudes
- Knowledge
- Experience
- Competencies
- Leading to fluency



The 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 new opportunities and – if they have digitally literate adult tour guides and media mentors. Chip Donohue

Media literacy matters

Media literacy is about helping children develop the life skills they need to become thinkers and makers in the multimedia environment that is their reality...

It is precisely because our culture surrounds us with media that we need to model healthy and productive ways to integrate digital media technologies into our lives.



Faith Rogow

Lisa Guernsey's 3Cs matter

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



Child development theory matters

- Know about child development and early learning and what is typical at each age and stage
- Know what is individually appropriate
- Understand the family context
- Know what is culturally important

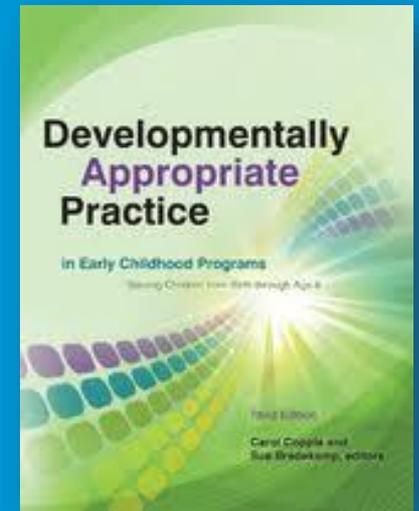


What would Montessori say?
Piaget? Vygotsky? Skinner?

DAP matters

Digitally literate educators who are grounded in child development theory and developmentally appropriate practices have the knowledge, skills, and experience to select and use technology tools and interactive media that suit the ages and developmental levels of the children in their care, and they know when and how to integrate technology into the program effectively.

NAEYC & FRC Joint Position Statement



ECE “essentials” matter

- Creativity, curiosity and wonder
- Open-ended exploration
- Unstructured, active, imaginative play
- Loose parts and hands-on learning
- Authentic and deep engagement
- Empowering experiences
- Outdoor play and nature
- Solitary and shared experiences
- Interactions and relationships



Creating media matters

- Young children are capable of creating their own messages and expressing themselves through media
- Give children (and their adults) control over what they use and how they use it
- Consuming media > Meaning-making > Creating media





From the Joint Position Statement

Technology and interactive media are tools that can promote effective learning and development when they are used intentionally by early childhood educators, within the framework of developmentally appropriate practice to support learning goals established for individual children.



What do we know and why does it matter?

With decades of research and scientific understanding of child development and more than 40 years of science and study of children's television use, a research literature has been established around the intersections of child development and traditional media technology. However, with the introduction of new technologies devices and applications, questions about developmentally appropriate usage of technology arise frequently, especially when it comes to use with younger children...more research needs to be done on the impact of technology, especially newer technologies, on children's learning and development, but there are ways in which educators can utilize what is known about more traditional media platforms to make smart media choices regarding new media devices.

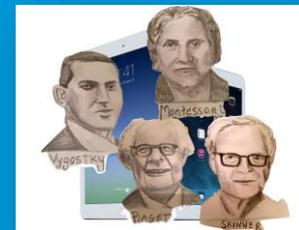
Michael B. Robb & Alexis Lauricella



What would Maria Montessori say?

The constructivism framework has cast a wide net over teaching, learning, and app design. It is well named—a child “constructs” his or her own knowledge internally throughout the lifecycle. The core ideas go back to Switzerland, where Johann Pestalozzi (1746–1827) and his student Friedrich Fröbel (1782–1852)— who coined the word kindergarten—cleared the theoretical brush so that Maria Montessori’s (1874–1952) could begin designing classroom techniques. The giant of constructivism, however, was Jean Piaget (1896–1980), who defined different stages of development, along with the notions of assimilation, accommodation, and equilibration. These ideas heavily influenced the open classrooms of the 1970s, and such ideas as whole language, LOGO, Scratch, and the Maker movement today.

Warren Buckleitner and friends



Tech and social-emotional development

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: "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 of 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



Innovate, educate, inspire with new tools

The look and feel of these newer digital technologies differ significantly from traditional manipulatives. However, the purpose and distinguishing features of quality tools are still framed by pedagogical practice, underscored by an implicit theory of learning, and designed to be implemented with intentionality by thoughtful educators. While the tools may change, the importance of knowing how to use them in ways that support young children's learning remains constant; the need for high-quality classrooms and learning experiences is unchanging.

Mark Bailey & Bonnie Blagojevic



Pioneering literacy in the digital age

When used well, digital media can enable access to information and stories, while also connecting schools, teachers, students, and families within neighborhoods, around the nation and around the world. Blogging, social networking, podcasting, instant messaging, posting to newsgroups or boards, and the Internet itself have brought new ways to connect, collaborate, and share, transforming the way we live and work...This culture simultaneously requires a host of new literacy skills and affords a dramatic re-envisioning of learning environments for both children and teachers.

Lisa Guernsey & Michael Levine



Technology to support dual language learners

Since DLLs make up 25% of the population of young children in the United States and they are the fastest growing segment of the population, finding new and innovative ways to ensure their academic success is of critical importance to the overall success of our national education system. Careful, intentional, and creative uses of technology can make it possible to elevate the entire field by improving outcomes for this key quarter of the young children served in early childhood education. No matter how sophisticated it may be, technology is still just one of the tools at a teacher's disposal. It is how a teacher masters and uses these tools that really leads to the success of young DLLs.

Karen Nemeth



Stepping into STEM with Young Children

Early Childhood educators have long recognized the importance of integrated approaches to learning, with a sound understanding that children's learning doesn't occur in neat, segregated curriculum boxes. This integrated approach is increasingly a priority for educators working with older children, with the STEM areas suggested as being of national importance for 21st Century learners. In recent years engagement in STEM with young children is also increasing. In the United States this has in part been prompted by President Obama's 2009 'White House Initiative: Educate to Innovate', while internationally the promotion of 21s Century learning skills along with the development of new curriculum and learning frameworks have provided the impetus.

Kate Highfield



Tech Tools to Strengthen Community

Even though advances in technology have expanded our notion of communities, we should always start by creating a culture of collaboration and communication within our immediate circles, which includes our classrooms, families, and neighborhoods, before expanding them outward. This will ensure that new connections beyond your geographical locations are meaningful and relevant.

Luisa Cotto



What would Fred say?

Fred Rogers wrote, “Where would any of us be without teachers – without people who have a passion for their art or their science or their craft and love it right in front of us?” Fred suggested that media had the potential to present children with enthusiastic teachers all the time. It is our responsibility to be the passionate teachers, or at least to bring teaching materials to life via media.

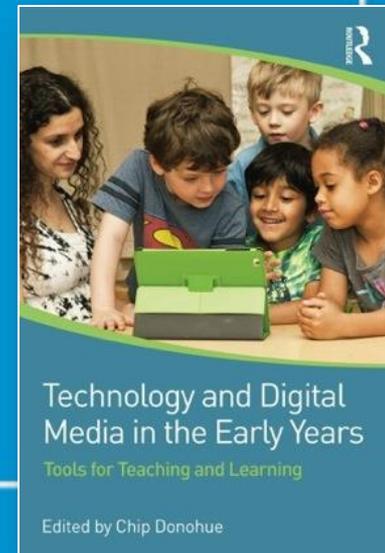
David Kleeman and Alice Wilder



Blending and balancing...

Perhaps it is the blending and balancing of interactive technology and interactions with others that offers the most promise for effective and appropriate uses of technology in the early years – closely connecting Fred Rogers' approach with our emerging understanding of appropriate and intentional use of digital media to support early learning.

Chip Donohue





For reflection...Can a screen be a window, mirror and magnifying glass?

- Imagine
 - A child looks through a **window** for a view of something beyond
 - A child looks into a **mirror** that reflects his/her interests
 - A child uses the screen as a **magnifying glass** to explore the world
- Would we count minutes of window time, mirror time or magnifying glass time and place the same limits as we do with screen time?
- How would teachers use technology differently?
- How could parents use digital windows, mirrors and magnifying glasses?
- We need to reflect on and explore our educational window of opportunity?

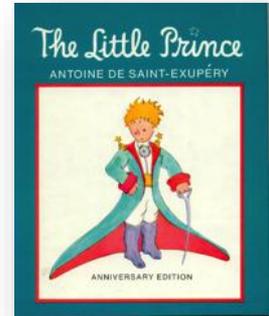


Every window – architectural or electronic – is a gateway to adventure, inquiry, fantasy, storytelling, self-discovery and learning. David Kleeman, PlayVangelist

Just imagine...educators turning screens into windows, mirrors and magnifying glasses



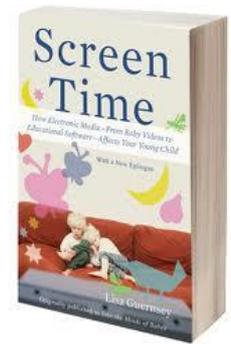
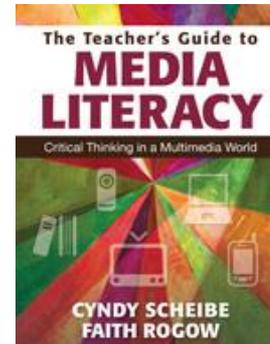
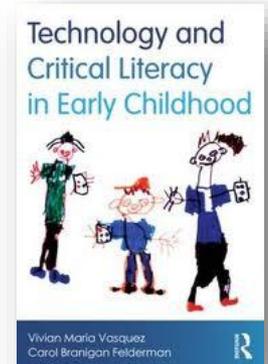
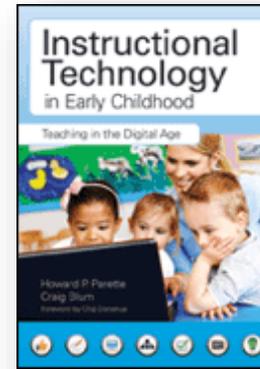
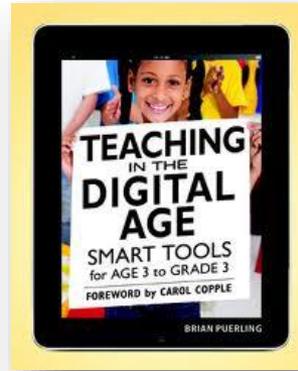
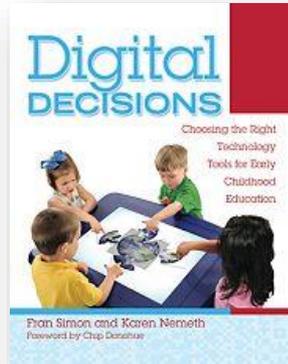
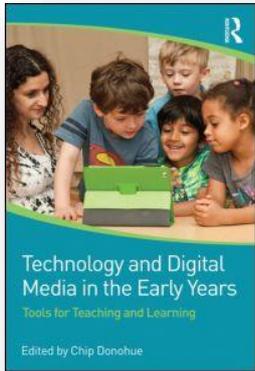
What is essential is invisible to the eye



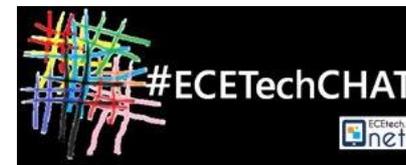
Mindful Media Use Matters

...Let's not get so fascinated by what the technology can do that we forget what it can't do...It's through relationships that we grow best and learn best.

TEC Curation – Favorite Resources



TEC Curation – Trusted Sources



Pittsburgh Association for the Education of Young Children



A young girl with dark skin and braided hair is smiling broadly, wearing a red and white striped shirt. She is the central focus of the image. In the background, other children are visible but out of focus.

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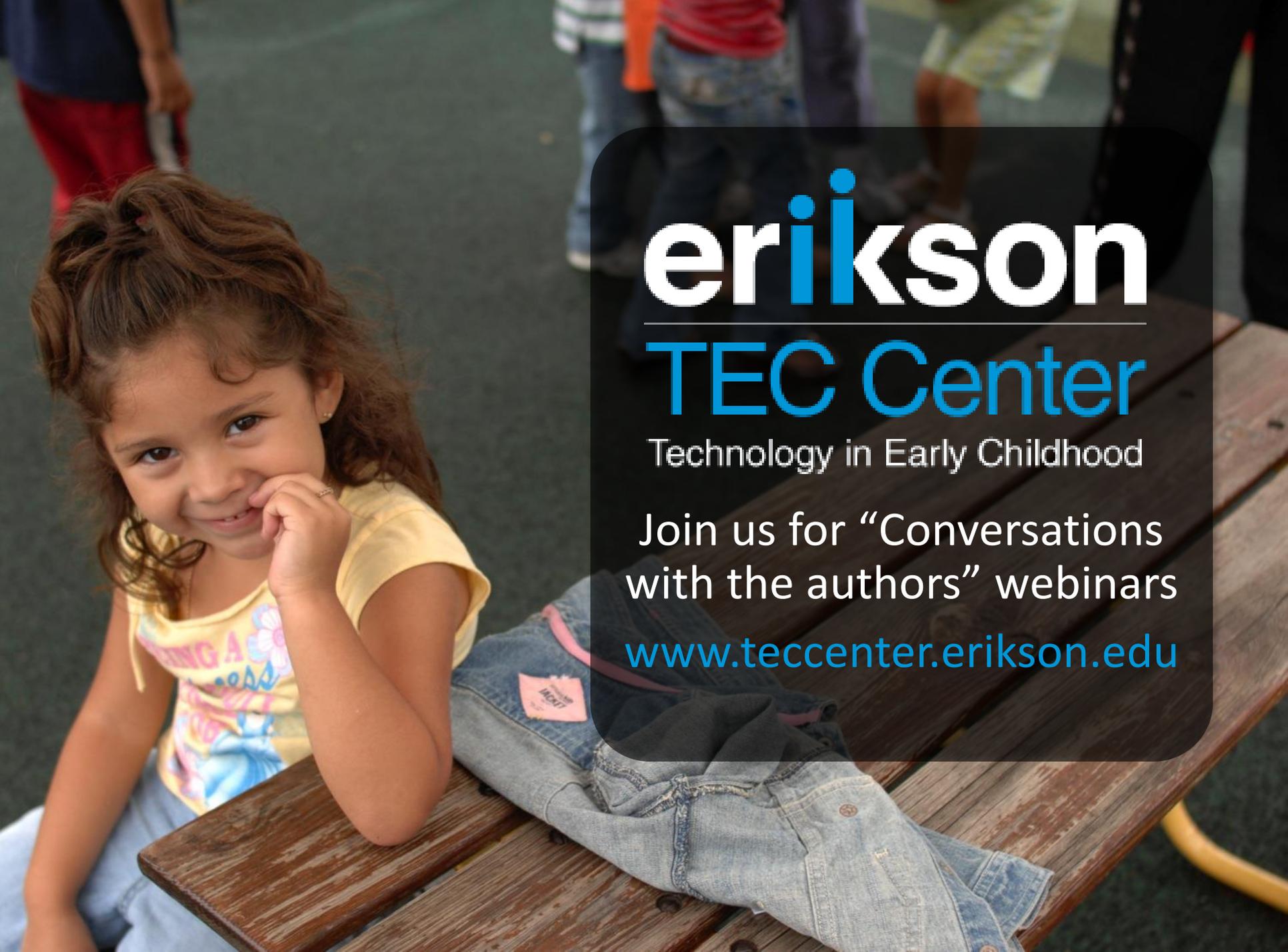
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