
Christina Taylor
University of Northern Colorado

Today’s astounding abundance of technology and digital media and the dizzying speed of their evolution leaves many educators, parents, and caretakers wondering how both may best serve the developmental needs of a child’s earliest years. The edited volume Technology and Digital Media in the Early Years: Tools for Teaching and Learning may prove a worthy guide.

Twenty-three contributing authors, primarily from the U.S. and all considered established, expert “early learning thought-leaders and innovators”, offer wisdom about best practices for adults who are “media mentors” for children aged birth to eight (p. iv). These practices and key concepts for teaching with technology are based on the National Association for the Education of Young Children (NAEYC) and Fred Rogers Center joint position statement on Technology and Interactive Media as Tools in Early Childhood Programs Serving Children from Birth Through Age 8 and the Fred Rogers Center Framework for Quality in Children’s Digital Media.

The editor summarizes the key messages of the joint position statement as follows:

- “When used intentionally and appropriately, technology and interactive media are effective tools to support learning and development.
- Intentional use requires early childhood teachers and administrators to have information and resources regarding the nature of those tools and the implications of their use with children.
- Limitations on the use of technology and media are important.
- Special considerations must be given to the use of technology with infants and toddlers.
- Attention to digital citizenship and equitable access is essential.
- Ongoing research and professional development are needed” (p.22).

Educators and non-educators alike will find this volume an accessible read which links current research and theoretical frameworks of child development and
learning theories to practice. The authors explore the following questions as related to our digital age: “What do educators know? What do educators need to learn? What do educators need to learn to do? What are the best practices? Why does it matter?” (p. 8). The editor suggests as a reader “you’ll have opportunities to enhance your digital literacy by learning more about how to appropriately and intentionally connect your goals for children’s healthy growth, development, and early learning with principles and practices of effective use so that you can select, use, integrate, and evaluate technology and digital media for your classroom and for each individual child” (p. 4).

The compilation is organized into the following three sections: Technology and Young Children; Technology in the Classroom; and Technology Beyond the Classroom. Chapters contain sections specific to the concept alignment of each topic with the core position statement and “take-aways” for teachers.

Lengthy resource lists are included throughout and a companion website provides even additional support at www.teccenter.erikson.edu.

Part I, Technology and Young Children, “focuses on children in the digital age with chapters connecting Fred Rodger’s approach and emphasis on social-emotional development to today’s digital media, an overview of technology and digital media as tools for teaching and learning, and tools for teacher education” (p. xvi).

In the first chapter Kleeman and Wilder respond to the editor’s question, “What would Fred Rodgers say?” and “consider what’s best for the child’s healthy development first and then look to technology and digital media for tools to achieve those goals” (p. 8). In the chapter which follows, Sharapan, a long-time colleague of Fred Rogers, “reminds us to remain cautious and continue to ask hard questions about the role of technology in the early years, even as she shares specific strategies and examples from teachers using technology as a tool for social-emotional development” (p. 8).

Donohue, the editor, is the sole author of a chapter which discusses “both the concerns and the opportunities that have been debated in the field”, reviews “the principles, guidelines, key messages and key words from the…NAEYC & Fred Rogers Center joint position statement”, and “shares resources on technology in the early years” (p. 8). He partners with Schomburg in the following chapter to discuss “three interrelated ways of thinking about technology as a tool: for teaching teachers, for teacher classroom management…and for teaching and learning with young children in the classroom” (p. 8). This chapter includes a look at “what teacher preparation standards and organizations are saying and doing about digital media literacy, for teacher educators, preservice, and inservice teachers” (p. 8).

Next Buckleitner “describes how theory can and should inform our selection and use of technology tools with young children” by asking the question, “What would Maria Montessori say about the iPad?” (p. 8). Piaget, Bruner, and Vygotsky join the conversation which “...helps us see how theory shapes design
and practice, and how design and practice demonstrate what we know and understand about child development theory” (p. 8).

Robb and Lauricella contribute the final chapter of Part I, in which they “distill complex research findings into teacher take-aways and pose questions that connect research to practice, build a bridge between television-based children’s media research and the affordances of new digital tools, and identify questions that remain” (p. 8).

Part II, *Technology in the Classroom*, contains “chapters on media literacy, early literacy in the digital age, technology tools to support dual language learners, and a framework for including all children in the technology-supported classroom” (p. xvi).

Rogow opens Part II with a chapter which “identifies and describes competencies and outcomes—the skills we all need to be literate in a digital world—and offers strategies for supporting emergent media literacy in developmentally appropriate ways and creating a classroom culture of inquiry” (p. 87). Guernsey and Levine follow with a chapter which shares “...examples and next steps for moving from pioneering to common literacy practices. They discuss the role technology can play when it complements the work of trained teachers and parents, while acknowledging the challenges early educators face” (p. 88).

The next contribution was authored by Nemeth, whose goal “is to inform educators about new and emerging technology options and to provide tips and strategies that increase...feelings of confidence and competence in selecting, using, integrating, and evaluating technology and digital media for dual language learners” (p. 88). Diversity in the classroom is further explored by Parette and Blum who “describe a UDL (Universal Design for Learning) technology framework that teachers can use to be sure the environment and activities are inclusive and the use of technology supports classroom goals while providing tools and supports for individual children” (p. 88).

Highfield follows with a chapter about the history of and rationale for STEM (Science, Technology, Engineering and Mathematics) in early childhood education, and a look at a research project which illustrates programming which “can fit into the developmentally appropriate framework, encourage hands-on investigations and experimentation, and allow for integration of STEM concepts across the curriculum” (p. 88).

“‘Innovate, educate, and empower’ are the calls to action...” of Bailey and Blagojevic as they encourage thoughtful use of “traditional materials alongside digital tools...” (p. 88). They explore “specific examples and best practices”, highlighting “Digital cameras, digital microscopes, tablets, and open-ended apps for story-telling, documentation and communication...” (p. 88). The section concludes with a chapter by Puerling and Fowler who share stories to describe “innovative... and engaging technologies” which can be used to strengthen home-school connections and support the creation and sharing of the artistic endeavors of students” (p. 88).
Part III, *Technology Beyond the Classroom*, examines “technology as a tool to strengthen the home-school connection and to strengthen communities, the emerging roles of children’s librarians at the intersection of digital media and early learning, and strategies for becoming a connected educator and a connected learner to support 21st-century goals for teaching and learning” (p. xvi).

Part III begins with a chapter of “practical advice for teachers” by Kaldor, “who identifies technology tools and strategies that can improve communication, build relationships, and strengthen the home-classroom and home-school connection” (p. 199). Cotto follows with stories and pictures about additional “…tools and strategies to build and strengthen the sense of ownership and community within the classroom, for the program or school, to the neighborhood and beyond” (p. 88).

Campbell and Kluver contribute a chapter which explores the “emerging role of children’s librarians at the intersection of digital media and early learning, and as media mentors for young children, parents, and educators” (p. 199). They describe the “...digital context for informal learning...” and “...suggest that the strategy libraries have used to support community learning efforts are the place to begin” (p. 199). The authors also share their “ACE model (Access, Content, and Engagement)” which "provides a framework for thinking about the role of technology and digital media in the library and for responding to the needs of children, parents, and educators in the digital age” (p. 199).

In the final chapter, Armstrong examines “what it means to be a connected educator and connected learner, and the implications for teaching and learning in the 21st-century” (p. 199). She offers ways to make such connections for adults and children and defines a “professional learning network...and a community of practice...” (p. 200).

Legitimate apprehensions abound regarding the combination of technology and our youngest learners. A sample of the many concerns addressed in this volume follows: the overall developmental appropriateness of the field and its devices; the healthy physical and social-emotional development of children; the long term impact of asynchronous communication on communication styles and relationships; privacy and security; equity of access; and the value of time invested in technology rather than spent directly with children.

Advantages of the use of technology with children are also described, often in the context of stories of actual classrooms and their activities. A sample of such benefits include: technical, digital, and media fluency; development of critical thinking as an essential life skill; empowerment; enhanced learning opportunities; willingness to explore and take risks; expanded creativity in maker spaces; and the creation of networks which strengthen communities.

The book fills a knowledge gap in scholarship about the complicated relationship between technology and the very young. It addresses the pressing need for guidance regarding teaching and learning digital and media literacy and
technology in the uncharted waters of our rapidly changing society. Our children spend an unprecedented number of hours per day interfacing with technology at home and school in the midst of adults who, more often than not, are ill equipped tour guides for their journeys. Just over 1% of U.S. teacher education programs train pre-service teachers to be technically fluent and digitally literate educators (p. 44), and one would suspect still fewer parents and caretakers are well versed.

It is comforting to know these authors “share a commitment to using technology as a tool to support relationships, social-emotional development, and pro-social behaviors” (p. 4) and have discussed their topics accordingly. Perhaps if we follow their lead we will not only become more effective, appropriate, and intentional users of technological resources, but better people as well.

Christina Taylor is a Doctoral Student in the Educational Studies Ed.D. program at the University of Northern Colorado. She can be reached at christina.taylor@unco.edu.