

Educational Technology

Just the Facts, Ma'am

Moving beyond screen time: Redefining developmentally appropriate technology use in early childhood education

http://www.rand.org/content/dam/rand/pubs/research_reports/RR600/RR673z2/RAND_RR673z2.pdf

This 2014 policy brief from the RAND Corporation challenges the traditional emphasis on screen time when discussing the use of technology in early childhood education. The authors argue that a more comprehensive definition of what constitutes developmentally appropriate technology use for young children should take into account the following six considerations: 1) Is it purposefully integrated to support learning? 2) Is the use solitary or taking place with others? 3) Is the activity sedentary or mobile? 4) What are the content and features of the media? 5) Are the device's features age-appropriate? 6) What is the total screen time involved?

Screen sense: Setting the record straight—Research-based guidelines for screen use for children under 3 years old

http://www.zerotothree.org/parenting-resources/screen-sense/screen-sense_wp_final3.pdf

This resource from ZERO TO THREE reviews what is known about the effect of screen media on young children's learning and development from birth to 3, and provides guidelines for screen use based on the evidence.

Technology and interactive media as tools in early childhood programs serving children from birth through age 8

http://www.naeyc.org/files/naeyc/PS_technology_WEB.pdf

This joint position statement from the National Association for the Education of Young Children and the Fred Rogers Center is intended primarily to provide guidance to those working in early childhood education programs serving children from birth through age 8. Although not developed as a guide for families in the selection and use of technology and interactive media in their homes, the information here may be helpful to inform such decisions.

Zero to Eight: Children's Media Use in America 2013

<https://www.common sense media.org/file/zero-to-eight-2013pdf-0/download> (full report)

<https://www.common sense media.org/zero-to-eight-2013-infographic> (infographic of results)

This report is based on the results of a large-scale, nationally representative survey to document children's media environments and behaviors. To obtain these results, parents of children ages 0 to 8 in the U.S. were surveyed and asked about media ranging from books/reading and music to mobile interactive media like smartphones and tablets.

Books

Donohue, C. (Ed.). *Technology and digital media in the early years: Tools for teaching and learning*. New York: Routledge.

This text is a guide to the effective, appropriate, and intentional use of technology with young children. It provides strategies, theoretical frameworks, links to research evidence, descriptions of best practice, and resources to develop essential digital literacy knowledge, skills, and experiences for early childhood educators.

Parette, H. P., & Blum, C. (2013). *Instructional technology in early childhood: Teaching in the digital age*. Baltimore: Brookes.

Parette and Blum's book is organized as a problem-solving guide for pre-K and kindergarten teachers to use in choosing and using instructional technology to improve outcomes and ensure that children with and without disabilities are actively engaged. Topics addressed include integrating developmentally appropriate technology into planned activities, using technology to enhance inclusion, and weaving technology into every part of the school day, including arrival, circle time, play, and transitions.

Articles

Facing the screen dilemma: Young children, technology and early education

<http://www.commercialfreechildhood.org/sites/default/files/facingthescreendilemma.pdf>

This guide is designed to help professionals and families to make informed decisions about whether, why, how, and when to use screen technologies with young children. It provides an overview of the research on screen time and young children. And it offers guidance for those who want their programs to be screen-free, as well as for those who choose to incorporate technology in their settings.

Making and taking virtual field trips in Pre-K and the primary grades

http://www.naeyc.org/files/yc/file/201111/Kirchen_Virtual_Field_Trips_Online%201111.pdf

A virtual field trip (VFT) is a technology-based experience that allows children to take an educational journey without leaving the classroom. Author Dennis Kirchen highlights options for two kinds of virtual field trips: predeveloped VFTs, which may be accessed on the Internet, and teacher-created VFTs.

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Read All About It

Shifting views: Exploring the potential for technology integration in early childhood education programs

<http://files.eric.ed.gov/fulltext/EJ1029330.pdf>

This study presents how two faculty who teach in early learning-related degree programs integrated educational technology into their play-based, early learning teaching pedagogy. This was done as a way to model how teachers can support children's play and learning opportunities. The authors identify how collegial dialogue helped them to use various technologies and social media in their teaching, which transformed their curriculum and pedagogical philosophy.

Using tablet computers with toddlers and young preschoolers

<http://sites.gsu.edu/bestpractices/files/2014/08/Using-Tablet-Computers-with-Toddlers-and-Young-Preschoolers-12aq5gs.pdf>

This article highlights examples that model the guidance provided in the NAEYC position statement.

What's app with that? Selecting educational apps for young children with disabilities

<http://yec.sagepub.com/content/16/2/15.full.pdf+html?ikey=zPIUiMBE9quB.&keytype=ref&siteid=spyec>

This article offers evidence and a model for how early childhood professionals can (a) evaluate the accessibility of apps, (b) identify how developmentally appropriate practices (DAPs) and apps intersect, (c) ensure app content is suitable, and (d) determine the relevance of apps to children's educational needs.

See For Yourself

AT in Action Videos <https://www.youtube.com/user/CTDinstitute>

Each of the videos in this series illustrates ways in which assistive technology can support learners of diverse abilities. Note that the series covers a broad age range, so not all clips show young children.

Collaborative Digital Presentations Enrich Projects (Tech2Learn Series)

https://www.youtube.com/watch?v=KzCQH58Bwpo&list=PLhwy3q7CvmVEN2liVRc_Bhp_k9eWNM0Ba&index=3

Watch how educator Kate Summers engages her students by asking them to teach back chemistry concepts to their peers via online demonstrations created with tech tools like Google Docs, Keynote, and PowerPoint.

CONNECT Module 5: Assistive Technology

<http://community.fpg.unc.edu/connect-modules/learners/module-5>

CONNECT Module 5 videos illustrate ways in which assistive technology can promote children's access to and participation in inclusive settings.

Differentiating Instruction Through Interactive Games

https://www.youtube.com/watch?v=XZ0BGXMf83U&list=PLhwy3q7CvmVEN2liVRc_Bhp_k9eWNM0Ba&index=1

Using tech tools and games acquired through grants and resourcefulness, second-grade teacher Robert Pronovost tailors math instruction to match students' individual learning styles in this video.

Free Online Resources Engage Elementary Kids (Tech2Learn Series)

https://www.youtube.com/watch?v=o6y49RXG7zg&list=PLhwy3q7CvmVEN2liVRc_Bhp_k9eWNM0Ba&index=2

Watch this video to see how fifth-grade teacher Nicole Dalesio keeps her class motivated to learn by encouraging them to create multimedia presentations and projects using technology tools on the web.

More Than Fun and Games: Digital Technologies and Children's Learning <http://teachertime.org/>

The National Center for Quality Teaching and Learning hosts regularly-scheduled webinars with resources for teachers. View the presentation and handouts from this November 2014 topic at the URL listed above.

Technology in Early Childhood Family Education (ECFE) Classrooms

<https://www.youtube.com/watch?v=wOhb4n4ADbM>

This video illustrates uses of technology, including SMART Boards, in its ECFE classrooms.

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See For Yourself

Technology-Based Student Assessment Strategies

<http://ctlt.weebly.com/authentic-assessment-of-student-learning.html>

This weebly presentation was created by Laura Ballard, Instructional Designer at GateWay Community College. It thoughtfully lays out options for ways in which to incorporate technology into student assignments/assessments as a way to integrate both content knowledge and technology application.

Using Technology for Authentic Assessment

http://www.cde.state.co.us/resultsmatter/RMVideoSeries_UsingTechnology.htm#top

These downloadable clips from the Results Matter website show a variety of ways to use technology to support authentic assessment. They range from actual footage of children to illustrations of how to incorporate videos in family-teacher conferences.

Wired To Read http://www.earlyliteracylearning.org/cellcast_presch_parent1.php

CELLcasts are audio/visual segments from the Center for Early Literacy Learning (CELL). They are available to watch and listen to online or download to an iPod/Mp3 player. This CELL cast provides ideas on how to incorporate computer technology into early literacy learning opportunities.

Find It Online

5 Myths About Young Children and Screen Media

<http://www.zerotothree.org/parenting-resources/screen-sense/5-myths-infographic.pdf>

This infographic debunks common myths about the impact of screen use on babies and toddlers. This would be a great set of questions to introduce as a true/false quiz, then debrief with relevant research from the sources of the infographic which are delineated in Screen sense: Setting the record straight—Research-based guidelines for screen use for children under 3 years old http://www.zerotothree.org/parenting-resources/screen-sense/screen-sense_wp_final3.pdf

50 Ways to Integrate Technology for Problem Based Learning and Student Projects

<http://blog.discoveryeducation.com/kgreen-erwin/files/2010/03/50-ways-to-integrate-tech-for-classroom-projects.pdf>

Connect with tons of ideas for resources, websites, virtual field trips, and other project based resources at this rich blog site.

Children's Technology Review (CTR) <http://childrenstech.com/>

Since 1993, CTR has been the name of a systematic survey of children's interactive media, with reviews written by "Picky Teachers" — reviewers with preschool or elementary classroom experience who have achieved inter-rater reliability on the same review instrument. The monthly electronic newsletter also notes trends in children's interactive media. Like the magazine Consumer Reports, the Flemington, N.J.-based newsletter takes no advertising.

CONNECT Module 5: Assistive Technology

<http://community.fpg.unc.edu/connect-modules/learners/module-5>

CONNECT Module 5 resources include evidence sources (e.g., law, research), activities (e.g., Create a Squishy Book <http://community.fpg.unc.edu/sites/community.fpg.unc.edu/files/resources/Activity/CONNECT-Activity-5-5a.pdf>), and planning tools.

EdTech Teacher <http://edtechteacher.org/>

This is a rich and diverse collection of resources for supporting educators who want to incorporate technology in all aspects of teaching. Don't miss the section called How We Help: Free Tools for Teachers which includes app recommendations, assessments and rubrics, and more.

Evaluating the Content of Websites

http://unfccc.int/essential_background/library/items/1420.php

http://libraries.dal.ca/using_the_library/evaluating_web_resources/6_criteria_for_websites.html

Looking for ways to make your students more savvy consumers of technology? Here are two sets of criteria that may be helpful.

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EZ Resources

<http://www.pacer.org/stc/pubs/EZ-AT-book-2011-final.pdf> (infant-toddler)

<http://www.pacer.org/stc/pubs/ezat.pdf> (ages 3-8)

The PACER Center's EZ AT 2: Simple Assistive Technology Ideas for Children Ages Birth to Three is a guide for increasing young children's participation in daily activities and routines using assistive technology. It offers a wide range of devices and products that promote best practices for home and classroom learning. EZ AT: Assistive Technology Activities for Children Ages 3 to 8 is a counterpart for older children

Family Center for Technology and Disability (FCTD) <http://www.fctd.info/>

FCTD provides a wide range of resources on assistive technology, from introductory fact sheets and training materials to in-depth discussion of best practices and emerging research. Try setting aside 30 minutes a day to review an FCTD resource and before you know it, you'll know a lot more about assistive technology and the ways in which it can improve the lives of the children with disabilities.

Selected Resources on Technology in Early Childhood Education

<http://www.naeyc.org/content/technology-and-young-children/resources>

NAEYC has compiled essential resources, reports, references, and readings in this extensive list. A section entitled Selected Readings on Teaching and Learning Online for EC Teacher Education & Professional Development should be of particular interest to faculty members.

Teachers Pay Teachers <http://www.teacherspayteachers.com/>

This website is the portal to an open marketplace where teachers can buy, sell, and share instructional and educational resources.

Tots 'n Tech <http://tnt.asu.edu/>

This website features research, articles, and practical examples of how to use assistive technology to support the full participation of young children. A great example is the December 2012 newsletter which focuses on using assistive technology to support literacy for infants and toddlers (<http://tnt.asu.edu/files/Dec2012Newsletter.pdf>).