

Integrating Technology in the Classroom

Practical Advice for Administrators

by Sharon Thompson Hirschy

“I need some new ideas for activities.”

“I can’t do all the assessments and still teach children!”

“I would use technology in the class but I don’t know how!”

“Why can’t we buy technology for my classroom?”

Need answers? Never fear: Technology is here! The modern approach to many of the tasks teachers and administrators face is to utilize technology. Integrating technology as one of the many tools used in classrooms, both by the teacher and the children, can be a positive experience for everyone. It doesn’t have to be expensive or require complicated training.

Technology is a vital part of our early education environment. Emails to parents, websites for programs, and



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computers or tablets in classrooms are common. States include technology as part of early learning standards for young children. Parents expect their children to use and to learn from technology in the classroom. Are your teachers on board with using technology in the classroom? Are you?

The Research on Technology

Children are using technology at home. A recent survey of over 350 families in a low-income community found 96% of children under four had used technology. Nearly one-half of the children under one used mobile devices daily (Kabali et.al., 2015). But parents do not always understand developmentally appropriate use.

Fortunately, teachers who practice developmentally appropriate technology integration help children become ready for school and enhance children’s physical, cognitive, math, language, literacy, and social skills.

Developmentally Appropriate Technology Use

Technology and Interactive Media as Tools in Early Childhood Programs Serving Children from Birth through Age 8, the position statement developed by the National

Association for the Education of Young Children and the Fred Rogers Center for Early Learning and Children’s Media at Saint Vincent College (2012) offers principles and guidelines for effectively integrating technology in early childhood classrooms.

According to the NAEYC/Fred Rogers statement, developmentally appropriate technology in a classroom:

- is interactive, engaging, and often involves teacher and children together.
- enhances non-digital activities in the classroom and is only one of many learning resources.
- builds on children’s previous knowledge.
- is a tool to identify, collate, create and evaluate curriculum.
- is intentional and used to meet learning objectives.
- involves teachers and other children in scaffolding a child’s use of technology.
- facilitates communication and interaction with families and is culturally appropriate.

- is inclusive, collaborative, social and accessible for all children.
- provides a variety of outcomes and creative expression.
- is adaptable for dual language learners, different learning styles, and special needs.

Preparing Teachers for 21st Century Teaching

Technology pervades our lives. We use it for shopping, planning, communicating, gaming, and socializing. Classroom use of technology requires a different set of skills and abilities. Today's teachers often use technology infrequently in classrooms or in ways that are not child-centered, according to a recent survey published in *Exchange* by Simon, Nemeth, and McManis (2013). Key factors that inhibit teachers' appropriate use of technology include time, administrative support and program philosophy, motivation, efficacy (the belief that they can do it!), family and culture, lack of mentors, concerns about

developmental appropriateness, lack of technology-focused professional development, uncertainty as to how to use and integrate in classrooms, and absence of on-going support.

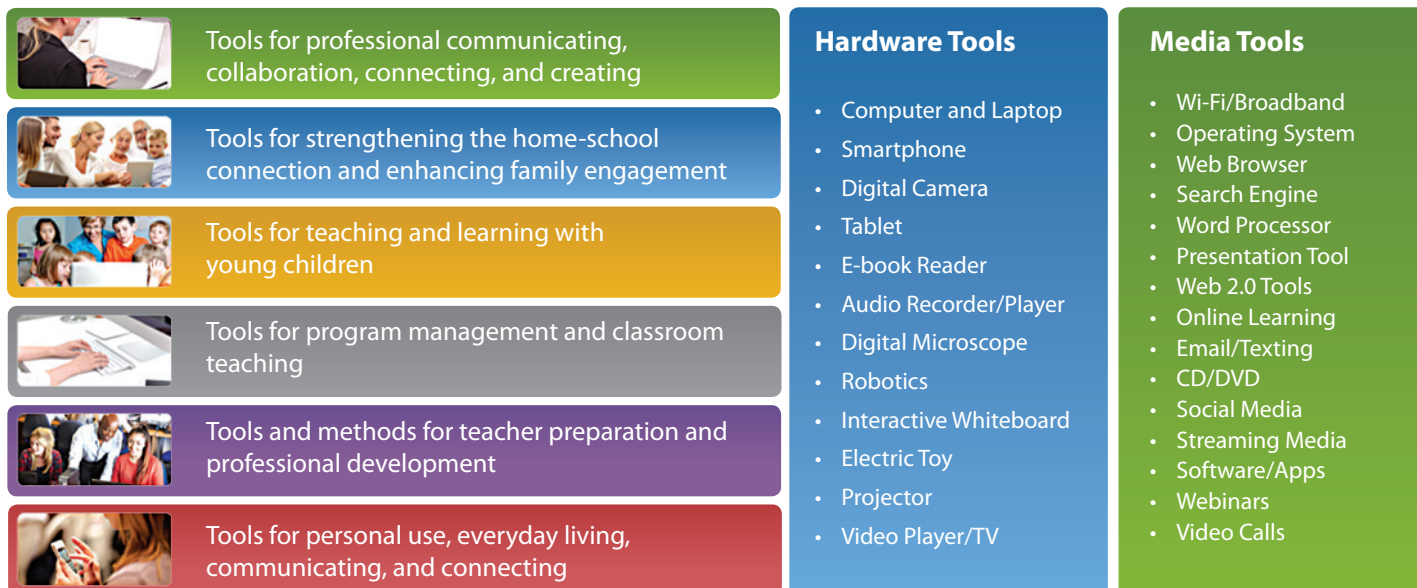
Create an environment that encourages teachers' appropriate integration of technology

- **Examine your understanding of technology integration.** Do you understand what effective technology integration really means? Have you read the NAEYC/Fred Rogers position statement?
- **Set appropriate policies on technology use.** Do policies impede teachers from using technology in the classroom? Administrative support and technology policy significantly impact teachers' attitudes and use of technology (Blackwell et al., 2014). Provide support through policies. For example, if you have concerns about cell phones in the classroom, provide teachers with refurbished smart phones with active Internet, camera,

and recorder abilities for the classroom rather than saying "no technology in the classroom."

- **Encourage teachers.** Allow them to take home iPads, digital cameras, and mobile technologies occasionally to practice with them — worry less about breakage and more about teachers' ability to use them! Teachers who practice with technology are more likely to use it in developmentally appropriate ways.
- **Set aside time for teachers to sit down and discuss how they use technology in their class.** Providing a little time to share and additional time to learn new apps and software outside of direct contact hours with children can make a difference.
- **Support for teachers is key to successful integration.** Create an open atmosphere in which teachers can ask questions.
- **Remind teachers that they do not have to be an expert (nor do you) in**

6 Layers of Technology Use in Early Childhood Education



the use of technology. They learn one thing at a time and integrate it with the appropriate practices they already follow.

- **Other teachers can provide support.** Individual teachers can learn a technology or app and teach and demonstrate it to others.
- **Programs are asking their 'techie' teachers to act as mentors.** They answer questions and model use. Administrators often give a small stipend and provide time for mentoring teachers to go to other teachers' classrooms to help.
- **Use high school students, parents, or community volunteers.** Many are willing to assist teachers. High school students are often looking for service learning opportunities — contact your local high school.
- **Reward the use of technology.** Give certificates for "Techie of the Month," a free jeans day, or other inexpensive incentives.

Encourage professional development.

- **Workshops in Technology Integration in Early Childhood.** Workshops that will help the most are those that offer the chance to use and apply the technology during the workshop. Many encourage participants to bring their smartphones and digital devices with them!
- **Personalized Learning Networks (PLN)** with other teachers in your program or in other programs around the world centered around the appropriate use of technology. PLNs are virtual learning hubs that can provide support, answers, and friendships that make the integration of technology easier. For more information on PLNs, read my article on Personal-

ized Learning Networks (*Exchange*, May/June 2016).

- **Webinars and video examples** of technology use in early childhood are available from many sources.
- **In-service opportunities to share ideas and information.** Offer 30-minute or one-hour in-service in which teachers plan and discuss technology use. Have someone demonstrate different technologies, apps, or programs.
- **Teacher play groups.** Provide snacks and technology for teachers to informally explore and use technology.
- **Center-focused learning.** Choose one or two apps, websites, or technologies that the whole center focuses on learning. For instance, Google Drive provides an easy way to create online forms for parents. Teachers can create individual folders on children that are private and only shared with the family. Have different teachers explore parts of Google Drive and share their knowledge with their colleagues.
- **Center resource site.** Create (or have built) a website and provide a resource center with information and web links for teachers. Encourage teachers to contribute.
- **Use technology yourself.** Learn to blog. Many centers are using blogs and Facebook (yes, you can keep things private for parents and managed) to share information with parents.
- **Finally, be sure that every teacher has a copy of the NAEYC/Fred Rogers position statement.** Ask them to read it and discuss it with them in a teacher meeting.

What about Costs and Funding?

While some technology is very expensive, most can be acquired at a reasonable price. iPads offer educational apps and ease of use that makes them the number one tablet in use in schools, but other tablets can be purchased for less than \$100, and some for less than \$50. Each child in a classroom does not need a tablet — social skills development occurs when children use tablets together in pairs or groups.

Tablets need the ability to take pictures and record voices as well as access the Internet. There are many free and low-cost but high-quality educational apps for tablets. Smartphones can be disconnected from service, but will still allow you to access the Internet, take pictures, and record. *Note:* You will need to hide the call feature as they still can access 911! Old cell phones or non-working technology provide STEM activities exploring the parts and role play by using them in dramatic play.

Summary

Technology in the classroom can contribute to better quality teaching and improve children's learning. It can also be a detriment if used improperly. Many workshops I attend include this warning from Mr. Rogers:

"...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."

Be a guiding force in the appropriate use of technology in your program. Set policies and provide resources that will take your program to the cutting edge of our modern world. It is not about the technology — it is about children's learning and development.

Resources

Websites:

Fred Rogers/NAEYC Technology Position Statement: Interactive version featuring videos, webinars, resources
<http://goo.gl/indZJE>

Mrs. Davidson's kindergarten:
<http://davisonkindergarten.blogspot.com/>

NAEYC Selected Technology Resources
<http://goo.gl/3T74VF>

TEC Center: Video examples, webinars, resources
<http://teccenter.erikson.edu/>

YouTube Video examples of the use of technology with young children
<https://goo.gl/n7br2w>

Free webinars on early childhood education and technology:

Early Childhood Investigations Webinars
<http://goo.gl/28IfJA>

EDWeb
www.edweb.net/prek3tech

Hatch Webinars
<http://goo.gl/a2uGyB>

Technology in Early Childhood Center (TEC) at Erikson
<http://goo.gl/nOOBQP>

Books:

Donohue, C. (editor). (2015). *Technology and digital media in the early years: Tools for teaching and learning*. New York: Routledge; Washington, DC: NAEYC.

Guernsey, L., & Levine, M. H. (2015). *Tap, click, read: Growing readers in a world of screens* (1st ed.). San Francisco: Jossey-Bass.

Puerling, B., & Copple, C. (2012). *Teaching in the digital age: Smart tools for*

age 3 to grade 3. St. Paul, MN: Redleaf Press.

Simon, F., & Nemeth, K. N. (2012). *Digital decisions: Choosing the right technology tools for early childhood education*. Lewisville, NC: Gryphon House.

References

Blackwell, C. K., Lauricella, A. R., & Wartella, E. (2014). Factors influencing digital technology use in early childhood education. *Computers & Education, 77*, 82–90.

Donohue, C., Armstrong, A., & Greene, E. (2015). "Strategies for Integrating Technology into Pre-Service and In-Service Early Childhood Teacher Preparation Programs." Conference session, Leadership Connections, Wheeling, IL.

Kabali, H. K., Irigoyen, M. M., Nunez-Davis, R., Budacki, J. G., Mohanty, S. H., Leister, K. P., & Bonner, R. L. (2015). Exposure and Use of Mobile Media Devices by Young Children. *Pediatrics*.
<http://doi.org/10.1542/peds.2015-2151>

National Association for the Education of Young Children, & Fred Rogers Center for Early Learning and Children's Media at Saint Vincent College. (2012). *Technology and interactive media as tools in early childhood programs serving children birth through age 8*. Washington, DC.

Simon, F., Nemeth, K., & McManis, D. (2013). Technology in ECE Classrooms: Results of a New Survey and Implications for the Field. *Exchange, 213*, 68-75.

