

What's in your toolbox?

New technology tools for EC professionals — Part I

by Chip Donohue

Since the early 1980s when the first Apple II® computer went into a preschool classroom in Madison, Wisconsin, I have been interested in how technology tools could be used to improve early childhood teaching practices and the preparation of professionals. During my (almost) 30-year quest I've played with just about every "can't miss" distance learning technology from paper and pencil correspondence courses to satellite broadcasts to video conferencing to online learning, and everything in between. Lately I've been spending a lot of time playing with the newest digital tools and Web 2.0 applications and imagining the possibilities for early childhood professionals.

This is the first in a two-part series on new technology tools you can use in your personal and professional lives. In this article, I'll identify new and emerg-



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ing technologies and Web 2.0 tools that offer great promise for: enhancing communication; exchanging ideas and information; sharing resources; accessing training, education, and professional development; improving practice; building a community of professionals; and strengthening advocacy efforts. In part two, I'll identify some of the most promising digital tools and applications and share ways you can use them — there really is "an app for that." But before you can take advantage of these amazing tools and applications, there are a number of challenges in moving Early Childhood Education 1.0 to an ECE 2.0 approach.

In this two-part series, I'll explore ways to turn technology obstacles into opportunities and share effective practices for blending high-tech tools with the high-touch preferences of early childhood professionals. I'll share innovative ways to bridge the gap between the powerful technologies and web-based tools you use in day-to-day living with tools you use in professional life. And I'll challenge you to get off the sidelines and "get in the game" by participating in social computing and contributing to the online community.

The utilization and participation gaps between personal and professional use of technology

When it comes to using technology, there is often a thin line between the personal and the professional. A number of important themes about acknowledging and overcoming these gaps for early childhood professionals are at the heart of my approach:

- What you need is already right at your fingertips.
- Once you're online, it really is a small world after all.
- The most effective tools for ECE blend the digital and the relational.
- You need tools for communication, collaboration, community building . . . for ECE 2.0.
- You need to find and use technology tools for living, learning, and working.

But the most important theme is that . . . *it's not about the technology!* It's about finding tools to better serve young children, parents, families, professionals, and communities. You don't have to love technology or be a 'techie' to make the most of the features and functionality these tools offer for managing your personal and professional life. In fact, you don't have to like technology at all.

"I got into television because I hated it so. And I thought there's some way of using this fabulous instrument to nurture those who would watch and listen."

Fred Rogers

Fred Rogers may have hated the technology of his day, but he found very successful ways to use it to support the healthy growth and development of young children. Our challenge is to be as intentional and authentic in our use of today's tech tools in early childhood care and education.

Taking the techno pulse of ECE professionals

Recently I've been asking the following questions at early childhood conferences to get a feel for just how tech savvy we've become as a field. Imagine you're in a large room with hundreds of other early childhood professionals, and raise your hand if you have:

- A cell phone or smartphone
- Two or more cell phones
- More than one computer at home
- A laptop computer or a netbook with wireless connectivity
- A digital camera and/or a digital video camcorder
- Made a purchase, arranged airline or hotel reservations, planned a trip, or gotten directions online
- Watched a video online at YouTube®
- Made an Internet audio or video call on Skype®
- Joined a social network group like Facebook®, Twitter®, or LinkedIn®
- A need to be on email morning, noon, and night
- Lost a morning of work time catching up on your social network

What I have learned, and you may have just realized, is that early childhood professionals are not as low-tech/high-touch as we used to be. We use a number of high-tech tools every

day and many of them are related to communications, relationships, and inter-actions. Think about how technology impacts your life every day — at home and at work — in your personal and professional contexts. And consider the applications and implications of the existing and emerging technologies that I'll identify and describe and how these tools might help (or are already helping) you achieve your goals for living, learning, and working.

Complete the self-check activity below and then reflect on these questions: Do you use tech tools more personally or professionally? Are there some personal uses that could also be beneficial as professional tools? Are there any tools you use personally and professionally? Were there any tools you weren't familiar with? Are there any tools you would like to add to your tech toolbox?

But before you upgrade your toolbox there are three really important steps to take:

1. Recruit a teenager or younger child who was 'born digital' to be your tech teacher and technical support provider.
2. Learn about Web 2.0 tools by forming a play group of 4-5 family members, friends, and colleagues who are interested in trying out new tools and sharing ideas about the personal and professional applications of these emerging technologies.
3. Visit www.ChildCareExchange.com to view one month's worth of 30 recommended tech tools and easy activities you can try out, play with, and learn from to move yourself toward ECE 2.0.

The goal is to put new tools in your tech toolbox for living, learning, and working. But it isn't enough to collect tech tools and apps. Remember this simple advice: Use it or lose it. Play, practice, compare notes, share links, keep searching, and have fun.

Self-check: What tools do you use personally and professionally?

For each tech tool listed, put a check mark in the box if you use it for personal and/or professional use. Think about one or two favorite or most frequent uses for each tool.

Tech Tools	Personal?	Professional?
Laptop/Desktop (with high-speed connectivity)		
Cell Phone or Smartphone (iPhone®, Google™ Android, BlackBerry®, Palm Pre®)		
Netbooks and Tablets (from companies like HP, Dell, Sony, Lenovo, Microsoft, Apple)		
Mobile Wireless Devices (WiFi, iPod Touch, PDAs, handheld game consoles)		
Digital Camera (a point-and-shoot digital still camera or a camera phone)		
Camcorder (camcorder, digital camera with video, Flip Video, iPod Nano)		
eBook Readers (Amazon Kindle, Barnes & Noble nook, iPad...)		
Skype® (VoIP: Voice over Internet protocol)		
Facebook®, Twitter®, LinkedIn® (social networking)		
You Tube® (watching videos, media sharing)		

Many bricks in the wall

There are a number of obstacles that impact how we use technology and our level of participation. The utilization and participation gaps need to be addressed before early childhood professionals can take full advantage of the opportunities technology tools offer. The profession has tended to be fairly low-tech with a strong preference for high-touch learning experiences. Many early childhood professionals, unlike the young children in their care, have come to computers as adult learners and are often resistant to using technology when face-to-face interactions and relationships are at the heart of their work.

“Brick walls are there for a reason. . . . Brick walls let us show our dedication. They are there to separate us from people who don’t want to really achieve their childhood dreams.”
Randy Pausch, *The Last Lecture*

Blending high-tech solutions with high-touch experiences increases access to information and education and provides effective ways to contribute, communicate, and collaborate

Access to technology and high-speed connections are improving, but there are still too many who have no access at all. We all need access to the information, resources, and opportunities on the Internet.

Affordability is a barrier to utilization and participation. Buying a new computer system and software, upgrading it every few years, and paying monthly fees for Internet access can be difficult or even impossible for some early childhood programs and professionals to afford.

Equity issues of access and affordability create a ‘digital divide’ within the early childhood profession with some programs and individuals being able to take advantage of technology tools while others cannot. Another concern is the ‘occupational divide’ between early childhood and other professions where the use of technology is widespread and more effective.

Low-tech skills and minimal experience. We need a workforce that has more experience with technology and has a higher level of technology literacy. It’s not enough to have the tools if we don’t know how to use them effectively to reach our goals. And having the tools but not taking part in the online community limits our ability to contribute and benefit from the collective knowledge. One of the main reasons we have utilization and participation gaps is lack of tech skills and experience.

Adult literacy is one of the biggest bricks in the wall. Randy Pausch, in *The Last Lecture*, says, “When there is an elephant in the room, introduce it.” Allow me to introduce the ECE elephant. Social computing, online learning, resource sharing, and e-commerce take place in a reading and writing environment. If an adult doesn’t read well, being online can be very intimidating and difficult — not fun and engaging. And if the adult doesn’t write well, the tendency is to participate less often (if at all) in the online exchange of ideas and information — meaning the community misses out on that person’s contributions.

Personal or professional? Having a laptop or smartphone with access to the Internet is not the same thing as using these tools to connect with others and take advantage of the online resources at your fingertips. I’ve realized that we use many high-tech digital tools and applications to communicate with one another and manage our personal lives, but we tend to be much farther behind in the

ways we use technology professionally to collaborate, manage our programs, and improve teaching practices.

Left unresolved, the barriers of access, affordability, equity, tech skills, adult literacy, and the difference between personal and professional use may widen the utilization and participation gaps between the ‘haves’ and ‘have-nots’ in early childhood, leaving children, parents, teachers, and administrators behind in an increasingly technological world. Knowing who is participating and *how* is exciting. Knowing who isn’t and why not, and understanding what we lose from all those who cannot or will not participate is terrifying.

So it is up to us to decide if all these bricks in the wall are obstacles or opportunities.

Since we’re in the business of ensuring that young children have great childhoods and helping parents, families, and staff achieve their childhood dreams, I think the answer is clear. So how do we get over, around, or through these walls?

Do you talk tech?

It’s hard to feel like you belong in the digital world if you can’t speak the language. Quickly scan the list of tech terms (see New Tech Terms). How many have you heard? How many do you know the meaning of? How many do you use in your daily interactions with others?

Shift happens

An old American Indian proverb says: “If the horse you are riding drops dead, it’s a good time to dismount.” Our ‘low-tech’ ECE 1.0 horse has died. We need to saddle up a new 2.0 horse. This new tech horse is a fast thoroughbred. Shift happens! Think of all the things that have changed in our lifetimes as a result of technology and digital media. My quick list on page 86 shows some of the

things that have been part of the analog to digital shift.

That's a lot of change in a short time and the pace is going to keep getting faster. So remember, *don't get caught up* shift creek *without a technology tool*.

Some of these tools may be new or unfamiliar to you. But what can you do to become more innovative and move your thinking 'outside the box?' To take your professional practice to the next level and move the profession from 1.0 to ECE 2.0?

Blogs, wikis, and twitter, oh, my!

Whether you're the Cowardly Lion in search of the courage to try technology, the Scarecrow seeking knowledge to use technology, or the Tin Man using your heart to combine the digital and the relational, technology can leave you with that "We're not in Kansas anymore" feeling. Here are a few final tips so that "Somewhere over the rainbow" is right at your fingertips.

1. Remember what brick walls are for.
2. Take a risk and try something new.
3. Don't abandon what has worked.
4. Combine the digital with the relational.
5. Connect effective practices and enabling technologies with best practices in ECE.
6. Learn to use tech tools personally so you can decide how to use them professionally.
7. Narrow the utilization gap between tools you use personally and those you use for work.
8. Get 'out there' and participate in social computing.
9. Model DAP (Digitally Appropriate Practice).
10. Use social media to share best practices and research and to build a professional community.
11. A bonus nudge: My friends in

New Zealand have an expression that fits perfectly: *Have a play!*

Now click your ruby slippers three times and say, "It's not about the technology. It's not about the technology. It's not about the technology."

The way of the Internet today focuses on collaboration, creates a participatory culture, encourages user contributions, builds collective intelligence, and creates connections leading to community — all good fits for who we are and how we are as early childhood professionals. With the help of new technologies, we are meeting, networking, organizing, sharing information and resources, connecting, and collaborating in new and powerful ways.

Thoughtful and intentional uses of technology will narrow the gaps in utilization and participation and high-tech/high-touch solutions will inform and engage the early childhood workforce in powerful and lasting ways. These are important outcomes for all early childhood professionals and for the young children, parents, and families in their care. I'll leave the last 'nudge' to Mr. Rogers.

"Computers can be useful machines, especially when they help people communicate in caring ways with each other." *Dear Mister Rogers, Does It Ever Rain in Your Neighborhood?*

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New Tech Terms

- Backchannel
- Blog
- Cloud computing
- Crowd sourcing
- Facebook®
- Hashtag
- Location awareness
- Mashup
- Microblogging
- Podcasting
- Twitter,® Tweet,® Tweetable,® Retweet®
- RSS
- Screen time
- Smartphone
- Tags, Tagging
- Texting
- VoIP
- Web 2.0
- WiFi
- Wiki

For definitions and helpful explanations of these and other tech terms, visit the Tech Terms Computer Dictionary at www.techterms.com.

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The Analog	The Digital
Landline phones	Wireless cell phones and smartphones, Internet audio and video calls
Phones that only make phone calls	Smartphones for making calls, checking email, going online, getting directions, and more
Phone books	Online directories and people/business search tools, electronic contact lists
Film photography	Digital photos and videos (with cameras and phones)
Buying music/movies on CDs/DVDs	Buying music/movies on iTunes, [®] files sharing, streaming, downloading, High-Def [®] and Blu-ray [®]
Going to the video store	Going to the mailbox or going online for video-on demand and real-time streaming
Books and Newspapers	eBooks, eBook Readers, RSS feeds
Hard-wired desktop computers	Mobile and wireless computing with laptops, netbooks, tablets, smartphones, portable devices
Paying for software and content	Using free, open source software, shared content, and open information communities
Going to school in a classroom	Learning online in your pajamas
Feeling isolated online	Feeling part of a social network with peer-to-peer, user-contributed content and crowd sourcing
Doing one thing at a time	Digital multitasking: Watch a teenager do homework, listen to music, download a movie, and text friends to say “meet me on Facebook.” [®]

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Learn more about the technology tools and toys mentioned in this article

- Amazon Kindle www.amazon.com/kindle
- Barnes & Noble nook www.BarnesandNoble.com/nook
- BlackBerry[®] www.blackberry.com

- Flip Video[®] www.theflip.com/en-us/
- Google[™] Android www.google.com
- iPad www.apple.com/ipad/
- iPhone www.apple.com/iphone/
- iPod Nano with video www.apple.com/ipodnano/features/
- iPod Touch www.apple.com/ipodtouch/
- Palm[®] www.palm.com

Watch for Part 2 —
New technology tools for early childhood professionals: There's an app for (almost) everything in the September/October issue of Exchange.

Acknowledgment: Thanks to the participants in my conference presentations at the Chicago Metro AEYC: *The world of ECE at our fingertips: Blending high tech with high touch*, and the Wisconsin Child Care Administrators Association: *We're off to see the wizard . . . Child care administration 2.0*, for having a play with these new and emerging tech tools and ideas that informed this article.

Old Tasks in Search of New Tools

Now that you've added a few tools to your tech toolbox, think about the administrative tasks you deal with every day. Place a 'check mark' in the box under each tech tool you are already using and a 'plus sign' for each tool you could use to be more efficient and effective.

Administrative Tasks	Desk or Laptop Computer, with high speed	Cell Phone/ Smartphone	Netbook/Tablet/ Mobile devices, WiFi	Digital Camera/ Camcorder	Skype	Facebook/ Twitter/ LinkedIn	YouTube
Management							
Communication							
Collaboration							
Community building							
Marketing							
Professional development							
Documentation							
Compliance							
Assessment							
Networking							
Advocacy							

From ECE 1.0 to 2.0 in a Month — 30 Easy Things You Can Do

Want to try out some of these tools but don't know where to start? Want to impress your friends and family — especially your teenager? Here is a list of easy, fun, and free things you can do — try one a day for a month and see just how web savvy and 2.0 you become.

1. Update your status, upload a photo, and find an old friend on Facebook®: www.facebook.com
2. Become a Facebook fan of Exchange Press: www.facebook.com/ExchangePress/, and the World Forum Foundation: www.facebook.com/WorldForumFoundation
3. Microblog on Twitter® and follow Teaching Strategies and PreK Now: <http://twitter.com>
4. Create your professional profile on LinkedIn®: www.linkedin.com
5. Set up Google™ Reader as your Newsreader: www.google.com/reader/
6. Add RSS feeds from organizations like NACCRRRA and Child Care Aware Parent Network
7. Subscribe to a Blog like the New American Foundation's Early Ed Watch: <http://earlyed.newamerica.net/blogmain> or Fran Simon's 140+ In the Moment Blog: <http://fssimon.wordpress.com/>
8. Join the ECETECH-L LISTSERVE by emailing LISTSERVE@LISTS.MAINE.EDU
9. Read *Young Children*, listen to NAEYC Radio, access professional development and resources: www.naeyc.org
10. Read *Exchange* articles, browse products, access resources, subscribe to *ExchangeEveryDay*: www.childcareexchange.com
11. Learn more about the World Forum on Early Care and Education, subscribe to Word Forum Radio and read Bonnie's Blog: www.worldforumfoundation.org
12. Learn about social bookmarking at Delicious: <http://delicious.com/>
13. Contribute content to Wikipedia: http://en.wikipedia.org/wiki/Main_Page
14. Post ratings and reviews at Amazon.com: www.amazon.com, Netflix: www.netflix.com, or iTunes: www.apple.com/itunes/
15. Collaborate with colleagues on an article for *Exchange* with Google™ Docs: <http://writeboard.com/>
16. Explore the Technology and Young Children Interest Forum website: www.technologyandyoungchildren.org/
17. Watch a video on YouTube®: www.youtube.com/, TED: www.ted.com/, or FORAtv: <http://fora.tv/>
18. Make a video call to a friend on Skype®: www.skype.com or Google™ Voice: www.google.com/voice
19. Share photos and videos at Photobucket: www.photobucket.com/ or Flickr: www.flickr.com/
20. Listen to BAM Radio: www.bamradionetwork.com/
21. Participate in the ECETECH Diigo group: <http://groups.diigo.com/group/ecetech> and wiki: <http://ecetech.wikispaces.com/>
22. Find rich media content (audio, video, graphics, text) at Videatives: www.videatives.com, the Fred Rogers Center: www.fredrogerscenter.org, and the Science of Early Child Development: www.scienceofecd.com/
23. Hang out with really smart people on iTunes U: www.apple.com/education/itunes-u/ or YouTube® EDU: www.youtube.com/edu
24. Browse the web in a new way with Mozilla Firefox®: www.mozilla.com/en-US/firefox/firefox.html, Google™ Chrome: www.google.com/chrome, or Apple Safari: www.apple.com/safari/
25. Search in new ways with Google™ social search: www.google.com and Bing visual search: www.bing.com/ and play with real-time search on Twitter®, Facebook®, or FriendFeed® <http://friendfeed.com/>
26. Seek knowledge at Harvard WIDE World: <http://wideworld.pz.harvard.edu/> and MIT World: <http://mitworld.mit.edu/>
27. Get involved and become a better advocate for young children and families at the Children's Defense Fund: www.childrensdefense.org/
28. Break out of your PowerPoint® slump with Prezi online presentation tool: <http://prezi.com/>
29. Create a wiki for a group project on Wikispaces: www.wikispaces.com
30. Catch the Google™ Wave: <https://wave.google.com/wave/> and tune into the Google™ Buzz: www.google.com/buzz