

Tools of engagement

Status report on technology in early childhood education

by Fran Simon and Chip Donohue

We've got the whole world in our hands

In recent years, a tidal wave of mobile digital devices and applications (apps) has found its way into the daily lives of early childhood professionals everywhere. It is safe to say that the speed at which new digital devices and apps get into our hands will not slow down. Our digital life is here to stay.

Most of us don't give a second thought to using ATM machines, digital cameras, Flip videocams, cell phones,



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smartphones, and WiFi connections to the Internet. But it appears that early childhood educators are slower to adopt iPads and other tablets with multi-touch screens, e-book readers, MP3 players, and gaming devices. Free Web 2.0 tools for communication and collaboration like Google Docs and Skype, and social media tools like Facebook, Twitter, and YouTube have also been slowly adopted even though these digital devices and apps have become ubiquitous in the personal and professional lives of millions of users around the world. In fact, a 2011 annual technology study for PBS (Grunwald, 2011) reports good news and bad — that Pre-K Teachers “trail K–12 teachers in their use of digital media and technology, but many see the benefits of age-appropriate digital content and technology.” Interestingly, the report also finds that overall Pre-K teachers have wholeheartedly welcomed and adopted the use of digital cameras at a significantly higher rate than K-12 teachers, and they “consider digital cameras to be the most valuable instructional technology.”

Finding our 21st century balance

Ironically, on one hand, the field continues to struggle with a low-tech/high-touch sense of itself in a digital world, while on the other hand we have already begun to use many of these powerful

digital tools to communicate, engage, and connect with others (Donohue, 2010; Simon & Donohue, 2011). In fact, we even use these tools to conduct virtual debates about and research their usefulness. Technology and media are rapidly expanding the materials and experiences to which young children have access in their homes and in their classrooms. This unparalleled access is affecting the ways in which young children interact with the world and others, influencing the content and delivery methods of teacher education and professional development, and providing early childhood professionals with new opportunities to connect with other professionals, parents, and stakeholders from around the world.

The push/pull of technology adoption is felt throughout the field. We're not quite sure how to manage our desire to continue to connect with children and families on a very personal 'high-touch' level and still take advantage of all that 21st century technology has to offer. Some of us are convinced that the best way to ensure developmentally appropriate practice and deep personal relationships is to avoid technology altogether. Others are tentatively exploring the integration of technology into our daily administrative and classroom practices and thinking deeply about how to use technology intentionally and with clearly defined

objectives. And, of course, other early childhood educators are fearlessly developing and implementing technology in their programs.

Using technology to communicate and collaborate: Probing the boundaries of engagement

In this *Exchange* Status Report we look at current technology trends and promising practices in the ways early childhood professionals are using digital technology to communicate, collaborate, connect, and build professional communities of interest and practice. Examples of effective practice are identified and shared to improve how early childhood professionals use these enabling technologies and how they participate in the social networks and communities found online. Innovative uses of technology are identified to describe and define the current state of technology use and to highlight emerging technologies and applications that will encourage and enable early childhood professionals to communicate, collaborate, connect, and build communities in engaging and empowering ways. With powerful digital tools in our hand it really is a “small world, after all.”

Gazing into our virtual crystal ball

Before we can narrow our focus to how technology is impacting early childhood professionals and the field, we need to make a few educated guesses about where technology-enabled communication and engagement is headed in this, the second decade of the 21st century.

According to the Pew Internet and American Life Project (Zickuhr, 2010), we use our digital devices and apps for a number of activities including: sending and receiving email; searching for information on the Internet; social networking; getting the news and reading blogs; buying products; watching videos; lis-

tening to music; making reservations or purchasing tickets; and playing games.

Think about your own use of digital devices and apps. How many of these activities are routine in your personal life? How many of these techniques and tools do you use in your professional life? What devices and apps do you use the most? Do you use the same devices and apps to manage your program or connect with colleagues, staff, and families?

In 2011 and beyond, technology will continue to change how and where we do our banking and pay our bills, find the price of an item or compare prices to other stores nearby, pay for things at the store or from vending machines, check in for a flight, read books, watch movies, access health records and health care services, and locate friends nearby. These are profound changes in our lives, and more applications are introduced every day. But what is even more striking is the impact of technology on the ways we connect with the other adults in our professional lives — colleagues, clients, college students, families in our programs, staff members, board members, legislators, policy makers, funding and government agencies, vendors, and all of the others who revolve in our early childhood universe. How do we effectively engage with others on behalf of children and families in a rapidly changing and increasingly wired world? We early childhood educators often find ourselves asking “How do Facebook, Twitter, YouTube, texting, and smartphones apply to my work?”

Our ‘small world’ trends

Here are six important trends and a few predictions about the tools of engagement we’ll be using most often and more effectively and the implications for early childhood educators:

1. Smartphones will become the essential tools for Internet access and

the hub of your digital life. An ultra-mobile device with wireless access puts your desktop and the Internet in your pocket. Smartphone cameras will continue to take over from digital point-and-shoot cameras. Applications on your mobile devices will replace software on your computer. Your software and hard drive will be replaced by ‘cloud computing’ that you can use on your laptop, tablet, or Smartphone from anywhere, any time. Your personal and business email, networking, and application accounts will always be on and equally accessible in the palm of your hand. Social media combined with handheld devices allow you to broadcast information instantly and widely.

Having tools that are always on and that blur the lines between personal and professional communication will change work/life for early educators, creating new opportunities and challenges. Instant access to the Internet and applications will provide early childhood educators with robust tools that make work better, faster, and deeper, as well as powerful distractions that force us to focus on priorities.

2. ‘Always on’ connections will force us to continue to seek a balance between becoming immersed in a digital world and needing face-to-face ‘real’ interactions with others. We will grapple with finding ways to balance our traditional high-touch approach with the high-tech realities with which we are faced in the 21st century.

For better or for worse, we will be instantly available to the adult stakeholders in our programs. Parents of children in our programs, students in colleges and universities, board members, colleagues, legislators, funders, regulatory agencies, and staff members will all be instantly available to us and we will be instantly available to them. All of the reporting we do in our various early childhood roles will be in real time. Sharing ideas

and strategies and solving problems will become easier, more broadly collaborative, and more timely. Will we abandon face-to-face meetings and conferences? Will we no longer talk to one another? No! But we will have more options than ever to engage with one another.

3. Digital multi-tasking will be easy when everything is at your fingertips.

You will continue to find it easier and faster to check your email, listen to music, post a message on Facebook, search the Internet, and get news updates all at the same time.

But being able to multi-task may also cause some early childhood professionals to want and need some *digital downtime* now and then when they can take a break from all the digital input and demands.

Certainly we will all need to develop program policies and procedures that guide appropriate technology use, especially in the classroom where the focus must always be on the children. The onus is on us to develop responsive and empowering policies that help us harness the power at our fingertips, adding powerful tools to our toolkits. There are many excellent resources for developing technology policies, but the unique challenges in the early childhood ecosystem require that we integrate guiding principles of the NAEYC *Code of Ethics*, the NAEYC Position Statement on Technology and Young Children, and other guidance for best practice and ethical conduct into our policies.

4. Video calling will be freely available on multiple devices and offer an effective way to communicate and connect with family, friends, and colleagues near and far.

Video calling can be a powerful tool for real-time coaching and mentoring, conferences, connecting children to parents, and a myriad of other uses that can transform our field. The only limit is your

imagination and accessibility on both ends of the call.

5. Multi-touch screens and devices like the iPad, the digital game-changers in 2010, will continue to amaze. They offer a new, more intuitive user interface with exciting implications for how we access and use information, entertainment, and educational media and open new opportunities for children to interact with technology alone and with others. In fact, iPads and similar tablet devices offer the most potential for use in both the back office and the classroom.

The mobility, affordability, 'always on' connectivity and rapid development of applications that offer ever-increasing levels of interactivity may perhaps be THE development that causes our field to sit up and take notice of the 21st century. The "Deepening Connections" technology study (Grunwald, 2011) reports that K-12 teachers, much more so than preschool teachers, view laptops, mobile tables or book readers (iPad, Kindle, etc.), and iPod Touch, iPod, and MP3 players as the portable technologies with the greatest potential. And indeed, they are.

The keys to success for use of iPads and similar devices will be:

- Assessing apps and websites with tools that integrate understanding of best practice in early childhood and making purchasing decisions based on these assessments.
- Becoming involved in the development of new apps and insisting that developers create apps that encourage divergent and creative thinking and deep problem-solving.
- Helping parents make wise choices about the time children spend using these devices and apps, and about how to select apps wisely.
- Developing policies that empower and govern, but don't impede the use of these technologies.

6. Social media can change the world.

As recent events around the world have demonstrated, the power of social media to rally people to a cause, to engage them in a dialogue about issues, to advocate for causes, and to take a stand for a shared belief guarantees that 2011 will continue to see the expansion and improvement of social media tools including Facebook, Twitter, LinkedIn, YouTube, and others. Social media tools will continue to integrate into web browsers, our accounts will be connected to each other across platforms, and our always-in-the-palm-of-our-hands technology will make our small world even smaller, more immediate, and more interconnected. Geolocation is becoming ever more embedded in social media tools, and mass texting tools are being deployed.

It might be difficult to fathom how the tool we use to connect with friends and update them on our lives can be useful in early education. After all, we're not going to put young children on Facebook! But, these tools have enormous (and somewhat under-realized) potential for early childhood professionals. If the only positive things that could be said about social media is that it is a great way to learn more about new resources, ideas, and trends in real time, connect with colleagues to share ideas, and deliver professional development, that would be a lot in and of itself. But there is so much more inherent value to social media in early childhood. In fact, there's a dotted line from eCommunication to early childhood.

According to the most recent report from the Pew Internet and American Life Project on social engagement, "Technology use has become deeply embedded in group life and is affecting the way civic and social groups behave and the way they impact their communities" (Rainie, Purcell, & Smith, 2011). The report indicates that 75% of Americans are active members of groups of some

kind and finds higher levels of engagement amongst Internet users, especially those who engage in group membership online. The report indicates that Internet users are more active participants in their groups than other adults, and are more likely than non-Internet users to feel pride and a sense of accomplishment. In fact, results show that Internet group members were more likely to attend a meeting or event, volunteer, contribute, or take a leadership role in the organization. In short, they are more engaged and invested in the groups in which they are members. So who are our ECE 'groups'? Our groups are our target audiences: Parents, adult learners, college students, colleagues, staff members, legislators, policymakers, board members, and more. These are the people with whom we want to engage, right?

There's our dotted line. . . . Attending meetings, contributing, volunteering, and taking leadership roles are the very results we need from our 'group members' in early childhood. The results are the heart of engagement, which we often find elusive in early childhood programs, college and professional development classrooms, professional communities of practice, action groups, and amongst our clients. Have we found a magic bullet? No. But we may have discovered that these new tools have enormous potential to make involvement in early childhood easier, deeper, and more practical for generations to come.

So what does this have to do with me?

How will all of this innovation impact your work? Regardless of whether your daily work is in the classroom, the back office, the boardroom, the conference room, or the offices of policymakers and funders, the implications are profound. Every person in every role in the early childhood ecosystem will be touched by the deluge of technology innovations in

2011 and beyond. You are not exempt. We will all be impacted in ways that can be extremely helpful, distracting, or potentially harmful. It is critical that we are informed and empowered in order to exploit the best aspects of technology and defend against those that are potentially detrimental.

A few keys to making our small world work in the palms of our hands

Here are a few very broad suggestions to help make this speed-of-light technology revolution work in early childhood:

- Even if you are resistant, open your mind to the possibilities.
- Form 'playgroups' within your organization to explore the tools that you see offering the most inherent value in your organization or program. Just focus on those tools to start.
- Develop technology policies that say "Yes, you can, and here's how," rather than, "Don't do this and don't do that."
- Use available tools for assessing technology use and evaluate and revise every six months.
- Provide technology training for your staff, but remember all technology training is not the same. Training on email is vastly different from training on app implementation in the classroom. You can't mark 'technology training' off your to-do-list unless it's training on the very specific implementation you want to see in your organization.

"Use the tools to figure out how to use the tools."

Don Marinelli, Executive Producer,
Entertainment Technology Center,
Carnegie Mellon University

Top Sites for Technology Trend Watching

- **Jane Hart and the Center for Learning and Performance Technologies:**
www.c4lpt.co.uk/
 - **Top 100 articles of 2010:**
www.c4lpt.co.uk/ReadingLists/2010review.html
 - **Top 100 Tools for Learning 2010:**
www.c4lpt.co.uk/recommended/top100-2010.html
 - **Top 100 Tools for Learning 2011 Emerging List:**
www.c4lpt.co.uk/recommended/2011.html
- **Learning Tools Directory 2011:**
<http://janeknight.typepad.com/pick/2011/02/learning-tools-directory-2011.html>
- **JWT Intelligence:**
www.slideshare.net/jwtintelligence/2f-100-things-to-watch-in-2011-6306251
- **The Horizon Report 2011:**
<http://net.educause.edu/ir/library/pdf/HR2011.pdf>
- **Mashable On Education:** <http://mashable.com/?s=education>
- **Nielsen Wire:** <http://blog.nielsen.com/nielsenwire/>
- **Pew Internet & American Life Project:** www.pewinternet.org/
- **Techcrunch:** <http://techcrunch.com/>
- **SmartBrief on Edtech:** www.smartbrief.com/edtech/

Here are a few of our favorite examples of proven strategies and promising practices used by early childhood professionals and organizations that are making the most of the digital possibilities.

Where to from here?

In the months ahead we will return to these technology trends, themes, and issues with articles focusing on new

technology tools for connecting early childhood professionals, tools for managing early childhood programs, the role of technology in early childhood teacher education and professional de-

Using Technology for Communicating, Collaborating, Connecting, and Community Building

Will digital devices and apps continue to have a powerful influence on our ability to communicate, collaborate, connect, and build community? When we shake the virtual eight ball, "All signs point to yes."

Organization	Website	Technology Tools	Effective Practices
Bam! Radio Network	www.bamradionetwork.com/	Podcasts; forums; social media including Facebook, Twitter, and LinkedIn; Channels for organizations include NAEYC, NHSA, NACCP, NAFCC, NACCRRA, and more	Brief information-packed radio interviews with panels of thought-leaders and authors on topics of importance to parents, educators, and leaders. Uses social media sites to spur conversation and encourage shared meaning on relevant topics.
Children's Defense Fund	www.ChildrensDefenseFund.org	Social media including Facebook, Twitter, LinkedIn, Flickr, and YouTube; Multimedia; CDF Data; Email alerts; newsletter; CDF in the News and News on Children's Issues; Take Action; Donate Now	Advocacy and public policy programs and campaigns. Research, reports, data, and resources for advocates and policymakers. Social media marketing, outreach, fundraising, and advocacy.
ECEWebinars.org	www.ECEwebinars.com	Webinars; blogs; social media including Facebook, Twitter, and LinkedIn; SlideShare; RSS feeds; blogs; email updates; and news	Provides free webinars delivered by thought-leaders to early childhood educators and posts issue-centric topical information on Twitter, Facebook, YouTube, SlideShare, and LinkedIn.
MomsRising	www.momsrising.org	Social media including Facebook, MySpace, Twitter, and YouTube; RSS feeds; email alerts; blogs; and fundraising	A leader in online membership building for advocacy and public policy. Focuses on issues related to women and families and has a strong early education program. Blogs, email, and social media are the primary tools used to recruit, connect, and activate members.
NACCRRA	www.naccrra.org	NACCRRA Radio; Online Parent Network; Early Childhood Focus email news alerts; social media including Facebook, Twitter, and YouTube; eLearning; Donate Now	Child Care Aware Parent Network, Child Care Aware (online resource and referral), use of social media tools for advocacy and public policy, email alerts on hot topics, donations, and eLearning for child care paraprofessional training.
NAEYC	www.naeyc.org	NAEYC Radio; social media including Facebook, YouTube, Twitter, and LinkedIn; eNews; video streaming; podcasts; online store; chats; web-based systems; distance learning; membership; Donate Now	NAEYC uses social media to connect members, advocacy, collaboration, information sharing, online Q&A with national authors and researchers, web-based training and accreditation systems, online publications, resources, and membership, donations.
World Forum Foundation	www.worldforumfoundation.org	Facebook; World Forum Radio podcasts; blogs; email distribution lists; World Forum at Work newsletter; ecelearn Learning Management System; audio and video clips; Online conference information, registration, and resources for delegates	Connects and sustains the World Forum community by encouraging and enabling communication and collaboration at a distance. Builds leadership capacity. Highlights activities and initiatives. Supports projects and programs including Global Leaders, Nature Action Collaboration for Children, Men in Early Care and others. Organizes presenters and topics and builds the program.

World Forum Community Taking Part in New Social Networking Initiatives 2011 World Forum in Honolulu

Global Leaders Online – 50 emerging leaders from Asia, Africa, the Arab region, the Caribbean, and North America will begin their two-year Global Leaders training program. While they will participate in two face-to-face meetings, much of their training, mentoring, and networking will take place online using the learning management system, ecelearn, developed by New Zealand Tertiary College.

During the coming year, all World Forum Working Groups will be connected using this platform.

Video Clips Galore – Four video teams will be hard at work capturing the voices and stories of the 2011 World Forum to share on www.WorldForumFoundation.org with the entire World Forum community.

Techno at WoFo – Attendees at the 2011 World Forum will be invited to share their stories and offer their feedback instantly using Twitter and Facebook.

World Forum registrants – stay tuned for instructions on how to prepare to participate.

Technology will stimulate and extend the discussions and work of the World Forum.

velopment, and technology with young children.

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