Exploring Digital Technologies from Multiple Perspectives

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ABSTRACT

This session will focus on ways campus programs can demonstrate leadership with creative and developmentally appropriate implementation of digital technologies.

Note on “Leadership”: I am by no means fluent in all the technologies I will be describing; I do believe, however, program leaders need to be good at:

- Finding & cultivating relationships with people who are
- Locating resources
- Conceptualizing & articulating how technologies can enhance and support our mission and further the mission of the University & School of Education
- Providing motivation, reinforcement, & encouragement to novice users
- Facilitating the discussion among our staff about technology as an element of our program
THIS SESSION WILL ADDRESS:

- **Establishing vision** (mission, goals, timelines)
- **Multiple perspectives:**
  - Administrative
  - Teacher support
  - Children/curriculum
  - Families
  - Community
- **Identifying key personnel** (risk, strategies, & PD)
- **Identifying resources & partners** (internal, external)
- **Examples from the program at my university** (website, blogs, wikis, news, digital stories, archiving data, accreditation folios, project work & documentation, teacher helps, social networking)
- **Sharing** (publishing, networking)
MILES EARLY CHILDHOOD DEVELOPMENT CENTER AT THE COLLEGE OF CHARLESTON

- Campus demonstration/model program
- Lab school/research site (@ 900 visitors annually)
- 2’s through kindergarten (4 Master teachers, 25-30 student TA’s)
- NAEYC accredited & state licensed child care
- 55-60 children, primarily campus-affiliated families
- Fully inclusive program
Mission, Goals, Timelines

VISION
What does your program mission statement say; does it provide any guidance?

For example, ours reads (in part), “....to provide a demonstration preschool for research, observation, and practicum purposes....”

We take that to mean that what we do should be “cutting edge,” including exploring ways in which technologies can be used appropriately in EC settings, just like any other area of the curriculum.

Children monitoring a web cam of a female barn owl sitting on her 6 eggs for several days until they all hatched, as part of a long-term study on nocturnal animals. 
http://www.ustream.tv/channel/owlceanside:

ESTABLISHING VISION
<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>How can we use technology to:</th>
<th>Current activities/initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>Make program operations more efficient &amp; friendly? Document program quality? Demonstrate leadership in ECE field?</td>
<td>Website (includes program blog); shared network folders; electronic accreditation folios (SchoolChapters); conference presentations; collaborative publications agenda; graduate course wiki; listserv</td>
</tr>
<tr>
<td>Teachers</td>
<td>Document &amp; share curriculum and classroom work? Communicate effectively with families? Gain access to community resources? Create engaging classroom resources &amp; materials? Work collaboratively?</td>
<td>Digital documentation formats (PowerPoint, PhotoStory, Imovie), classroom &amp; hallway displays; electronic NAEYC folios (SchoolChapters); digital news (wiki); extensive use of web-based resources; daily printing, scanning, cataloguing, &amp; archiving of digital images; shared documents (GoogleDocs)</td>
</tr>
<tr>
<td>Children (curriculum)</td>
<td>Expand curriculum beyond our walls? Engage children in 'real world' uses? Protect children from dangers?</td>
<td>Livecam webfeeds; search by image; email to 'experts;' virtual tours; skype; cameras &amp; audio-recorders in the hands of children; classroom publishing &amp; printing; transcribe dictation</td>
</tr>
<tr>
<td>Families</td>
<td>Share insights and interests? Build community?</td>
<td>RSS feeds; discussion group blogs; wiki participation</td>
</tr>
<tr>
<td>Community</td>
<td>Support the University sustainability initiative? Maintain visibility?</td>
<td>online forms; electronic delivery of most communications &amp; ‘paperwork;’ regular participation in open listservs</td>
</tr>
</tbody>
</table>
Example: “Over the next year, we want to explore additional ways technology we already have can be used in developmentally appropriate ways to support our curriculum.”

This teacher started using her digital camera and poster boards to experiment with simple (low-tech) documentation strategies over the course of a long-term project period.

She still uses this type of display when she wants to get something up quickly – but her last documentation was a hard-cover Snapfish book, that we provided to parents in soft-cover version.

Goals should be:

- **Reasonable:** within the means and resources your program is able to provide

- **Practical:** expands existing capabilities in ways that are likely to be implemented

- **reachable:** Time frame provides good likelihood that goal can be reached in specified period.

- **Revisited regularly:** Technology is a ‘moving target’
IDENTIFYING KEY PERSONNEL
Identify:

- **Risk-takers** – not concerned with ‘failure,’ i.e. all explorations are winners!

- **Risk-avoiders** – either now, in the future, or never....

- **Modelers** – willing to share and help teach others

- **Invite, don’t push** (offer rewards like extra planning time, the next new computer, etc.), “Friendly” competition often takes care of this by itself!

- **Look to campus for PD**

Each of our four master teachers had her own comfort level with technology, and a different strategy was needed to bring each person along.

- Mary – project documentation
- Video editing
- Stephanie – anything with email!
- Deanna – online publishing

Our GA’s are often eager to use their technology skills. The risk for them is the academic application - Ryan jumped on using PPT to try documenting The Python Project.

This year, our GA’s took on the responsibility for classroom weekly news (in electronic format) – we have a wiki, blog, and emailed PDF’s.
Find & befriend your local IT folks – make an appointment with them to discuss the CONCEPTS you want to work on – you can suck them in on an idea (as many parts of their jobs are b-o-r-i-n-g), and they will then come over and help you figure out how to do it!!!

Example: we shared our desire to create multi-media project documentations for posting to our website; because of a keen interest in the one example we described, it led to (a) helping us redo our website to house project documentations, (b) ‘gifts’ of hardware, and (c) lots of free training!!!
Campus infrastructure, Partnerships, External funding

RESOURCES
Five years ago, we started this initiative with:

+ 1 new desktop PC for the office (no graphics)
+ 1 classroom desktop (hand-me-down) with small selection of software programs for children
+ 2 (recycled) laptops for 4 teachers
+ Hard-wired internet access (primarily used for email)
+ 1 networked black & white printer/copier
+ 1 Polaroid camera
+ 1 (broken) VHS camcorder
+ 1 cassette recorder
## Resources: Current Inventory

<table>
<thead>
<tr>
<th>Hardware &amp; software</th>
<th>Acquired since 2006</th>
<th>User(s)</th>
<th>Funding Source</th>
<th>Approximate cost to program</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 desktops (PC)</td>
<td>3 new</td>
<td>Director, admin asst, 1 portable on cart; 1 for library</td>
<td>Program funds (1); University IT grant (2)</td>
<td>$1300</td>
</tr>
<tr>
<td>5 laptops (PC)</td>
<td>2 replaced, 3 new</td>
<td>Teachers, director</td>
<td>University replacement initiative (3); internal IT PD grant (2)</td>
<td>0</td>
</tr>
<tr>
<td>2 color printers</td>
<td>new</td>
<td>shared between teachers</td>
<td>Program funds</td>
<td>$400</td>
</tr>
<tr>
<td>1 color printer/scanner</td>
<td>new</td>
<td>Director</td>
<td>Personal funds</td>
<td>0</td>
</tr>
<tr>
<td>1 networked color printer/scanner</td>
<td>Replacement</td>
<td>Admin asst, teachers</td>
<td>Program funds</td>
<td>$250</td>
</tr>
<tr>
<td>4 digital cameras</td>
<td>New</td>
<td>Teachers</td>
<td>PTO</td>
<td>0</td>
</tr>
<tr>
<td>1 digital camcorder</td>
<td>New</td>
<td>Everyone</td>
<td>PTO</td>
<td>0</td>
</tr>
<tr>
<td>4 digital audio recorders</td>
<td>New</td>
<td>Teachers</td>
<td>PTO</td>
<td>0</td>
</tr>
<tr>
<td>1 smartboard &amp; software</td>
<td>New</td>
<td>Everyone</td>
<td>Internal research grant</td>
<td>0</td>
</tr>
<tr>
<td>1 digital document camera</td>
<td>New</td>
<td>Teachers</td>
<td>Internal research grant</td>
<td>0</td>
</tr>
<tr>
<td>Adobe</td>
<td>New</td>
<td>Everyone</td>
<td>University site license</td>
<td>0</td>
</tr>
<tr>
<td>Lacie hard drive</td>
<td>New</td>
<td>Director (shares)</td>
<td>Internal PD grant</td>
<td>0</td>
</tr>
<tr>
<td>4 thumb drives</td>
<td>New</td>
<td>Teachers</td>
<td>Program funds</td>
<td>$120</td>
</tr>
</tbody>
</table>
RESOURCES: GET CREATIVE!

- In-kind & trades
- Surplus (we get old hardware, like keyboards to practice with, monitors to take apart, cellphones for dramatic play, for free)
- Campus collaborations, research grants, especially those with funding for hardware
- Wish-lists (PTO)

Until we could afford to buy a scanner, we ‘traded’ scanning services for use of our library of children's books with one of the professors in the School of Education.
Presenter publications on topic:


Sponsored by the NAEYC Technology & Young Children Interest Forum:

- [http://ecetech.wikispaces.com/](http://ecetech.wikispaces.com/)
- [http://groups.diigo.com/group/ecetech](http://groups.diigo.com/group/ecetech)
- [http://www.techandyoungchildren.org/about.html#forum](http://www.techandyoungchildren.org/about.html#forum)

These are great, because they focus specifically on ECE and are chock-full of leading edge ideas!
Website, blogs/wikis, digital documentation, archiving, collaboration

PROGRAM EXAMPLES
Websites are a continual work-in-progress. We don’t need (or have to pay for) an external site administrator. We are always learning something new – right now we are converting all our forms to interactive format.

We have sites from other programs bookmarked and are continually inspired by what we see others doing. Advice: don’t let the frills get in the way of content.

Our website incorporates:

- Scrolling pictures at the top
- Blog on the front page with access to all archived posts (only writable by me)
- Pages designed for groups of stakeholders
- ADA compliant color-scheme (white with high/contrast text)
- Virtual reality tours & other media
A blog is like an interactive journal. Individuals can post messages and reply or respond to other posts. Facebook is an example of a modified blog. A blog can be inserted into another online form (like a website).

Blogs are:
- free
- available through many online sources
- easy to set up and use
- lots of attractive formats, gadgets, etc.
- Great for group discussion on topics of interest (staff, families, etc.)

Blogs set up for kid use include: http://kidblog.org/home.php;

A group of our parents set up a blog as a discussion board for sharing information and insights about topics of interest.
A wiki is an interactive website, with more capabilities than a blog for uploading and interactive communications.

Membership is by invitation only, privacy levels can be set as desired.

Members' access is also set by owners – can vary from unlimited editing to read-only.

Popular sites for free wiki setup are:
- PBWorks - http://pbworks.com/
- Wikispaces - http://www.wikispaces.com/about

The GA's in our Seashell (2's) class converted the paper format newsletter to an interactive wiki. Parents love it!
Digital storytelling is available in many formats and also can be found for free. It offers the advantages of being able to insert audio clips, images, and text so that children and adults can tell stories and others can hear them in their own words.

Audio books are particularly useful for assessment, as digital stories offer “primary source” evidence of growth. Photostory (Microsoft) is probably the most well-known utility, Voicethread (http://voicethread.com/) is another with interesting features.

Our three-year olds talking about their favorite train stories.
Doesn’t have to be fancy, but these opportunities are fleeting, and once they are gone, they are gone!

Ideas: Classroom notebooks; picture frames; video
Our most recent acquisition is a digital document camera (Lumens).

It enables viewing objects from any angle and uploading images for split/screen viewing.
We use our blog for multiple purposes: to instruct or inform, publicize, and sometimes just to share the kinds of things parents miss when their children are with us. A picture truly can be worth a thousand words!
“Sarah & Sarah Solve a Problem”

We frequently use PowerPoint to tell the story of a project or event.

In this case, the tale of how two children resolved a disagreement over a rock they found on the playground provided a perfect opportunity to share an example of our constructivist approach to conflict resolution.

PROGRAM EXAMPLES: DOCUMENTING TEACHABLE MOMENTS
Online sources such as “Snapfish” provide easy-to-use means for creating real books - perfect for project documentations; parents can also purchase if they wish.

**PROGRAM EXAMPLES: DOCUMENTING LONG-TERM PROJECT WORK**
Our primary means for documentation is PowerPoint; easy to use and edit; professional in appearance; open-ended; easy to convert to pdf to lock down and upload to our website.
We have many bilingual children; auto-translation features are invaluable to us for multiple purposes.

Searching using the ‘image’ feature makes it easy for teachers to collect photos they then use for things like lotto games, puzzles, etc.
We have an extensive collection of juvenile literature and media; we found inexpensive ($29.99) software for cataloguing and tracking: http://www.collectorz.com/.

This software has search features (like Amazon) that enable us to easily identify for example, all books on hand with a Charleston theme.
Our decision to use an **electronic format** for accreditation folios was intentional; posting access to them on our website (a) supports our mission as a demonstration program, (b) provides a permanent and practical application for all the teachers, and provided motivation for best efforts. We have provided the company with a LOT of feedback, as the effort is a work-in-progress.
FOOD FOR THOUGHT
DATU: DEVELOPMENTALLY APPROPRIATE TECHNOLOGY USE

- How does a new generation of technologies impact the landscape of early childhood education?
- How can your program benefit from technology innovation without being overwhelmed?
- How can we introduce children to technology appropriately?
- How do we address resistance to change?
- Is it our place to address the “digital divide?”