Technology for Young Children

Mary Airy
Grant Wood Area Education Agency
Cedar Rapids, IA
mairy@gwaea.org

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Intended Learning

• examine and discuss the case for integrating digital media literacy into standards-based early childhood educational practice.

• identify opportunities to integrate digital media literacy in own programs

• will be able to analyze and choose apps appropriate for young children

• will know additional resources to use with others
Session Agenda

• Welcome
• NAEYC/Fred Rogers Interactive Media Position Statement
• Technology in Early Childhood Programs (Birth-Age 8)
  – What kinds of tech found in EC Classrooms?
  – Quality Preschool Apps for iPads
  – iPad Apps by Category
NAEYC/Fred Rogers
Interactive Media Position Statement
Technology and Interactive Media as Tools in Early Childhood Programs
Serving Children from Birth through Age 8

A joint position statement of 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

http://www.naeyc.org/content/technology-and-young-children
Follow Fred’s lead…Use tech “with” rather than “instead of”

We have to help give children tools, building blocks for active play. And the computer is one of those building blocks. No computer will ever take the place of wooden toys or building blocks. But that doesn’t mean they have to be mutually exclusive.
What are the concerns?

• Too much passive, non-interactive use

• Exposure to inappropriate content (violence, sexuality, lifestyle)

• Commercial messages and in-app sales aimed at children

• Negative impact on social-emotional development – socially isolating, interrupts adult-child relationship
What are the concerns?

• Displaces / replaces traditional, developmentally valuable activities like hands-on, creative and open-ended play, construction, small manipulatives...

• Reduces outdoor time, decreases physical activity / Increases obesity

• Increases sleep disruptions

• Adult media use, misuse, over use and “always on” tech – background TV
From Screen Time to Interactive Touchscreens with Engaging Content

Dr. Dimitri Christakis  
Pediatrician & George Adkins Professor of Pediatrics  
Director of the Center for Child Health, Behavior and Development  
Seattle Children’s Research Institute  
University of Washington

There's no reason whatsoever that a caregiver can't use an app with their child. It's a great opportunity for what we call 'joint attention' — the interactions between a child and a caregiver, the back-and-forth, which is critical not just to language development, but brain development.”

A Hunch Isn’t Science: Still No Evidence That Touch Screens Are Good for Babies. Susan Linn, Huffington Post, 3/19/14
Let’s Review: What does the NAEYC/FRC position statement say about young children and technology?
Key Messages of the NAEYC/Fred Rogers Center
Position Statement on Technology and Interactive Media in Early Childhood Programs

• Read the Key Messages.
• As a small group (partners/triads) discuss the article and respond to the 4 Square HO
• Be prepared to share.
Key statements

- Intentionality
- Purpose
- Engagement
- Appropriate
- Equitable

- Interactive
- Digital citizenship
- Access
- Integrated
- Another tool for learning
The 3Cs for choosing tech tools

• **CONTENT** How does this help children engage, express, imagine, or explore?

• **CONTEXT** How does it complement, and not interrupt, children’s natural play?

• The Unique **CHILD**: How do we choose the right tech tools and experiences for each child’s needs, abilities, interests and development stage?

*Digital Media and Early Learning: What We Know & What We Need to Know*
Alliance for Early Learning in a Digital Age
Relationships matter

- Young children learn best in the context of interactions and relationships with attentive, responsive, caring adults
- Media use in the context of the adult/child relationship
- Technology as a tool to strengthen relationships with adults and peers
- A more knowledgeable other/more capable peers (Vygotsky)
Relationships matter

• Co-viewing < joint engagement with media – using media together leads to more learning

• Socially contingent / responsive interactions

• Parasocial relationships

• Social-emotional development

• Pro-social behaviors

• Guided play and me
Context matters

• Children learn best in active environments when they are engaged in meaningful, interactive and social contexts

• The individual child’s development, learning and the family media ecology matter

• Providing access to quality media requires engaging parents and children at home, in school and in informal “third spaces” – libraries, museums, zoos, nature
Creating media matters

- Young children are capable of creating their own messages and expressing themselves through media
- Focus on intrinsic motivation rather than rewards – Make it engaging, fun, interactive and interesting
- Give children (and their adults) control over what use and how they use it – open ended tools for exploration
- Consuming media
Digital media literacy matters

- Attitudes
- Knowledge
- Experience
- Competencies
- Leading to fluency
- DML for “4M” educators in formal and informal settings, teacher educators, trainers and parents
The 4Ms for digital age educators

1. **Manager**
2. **Mediator**
3. **Mentor**
4. **Maker**
Kinds of Technology
What kinds of technology are the in the classroom?

- Cameras
- Mp3 players
- Flip cameras
- Smart boards
- Smart phones
- Projector
- Laptop
- Desktop
- Elmo
- iPad/iPod Touch
- Typewriter
- Listening center
Quality Preschool Apps for iPads
iPads
Our kids will know a lot!!

How do you *THINK* my first day of kindergarten went?!?

They didn't even have Wi-Fi...

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What do educators need to be successful with technology?

• On-going Professional development to include Playtime
• Pre-service preparation
• Hands-on opportunities to play
• Communities to practice together
• New and ongoing research
• Digital Citizenship for Educators
Beyond the iPad center – how to integrate technology throughout your day

**iPad Rules**
- listen for directions
- look at the teacher
- keep the iPad on the table
- practice with 1 finger

**Rules for the iPad**
1. Carry the iPad with two hands to your seat.
2. Hold the iPad by the base, not the cover.
3. Always sit down while using the iPad.
4. No banging, slamming, or hitting the iPad.
5. Share nicely and stop when your turn is over.

www.heidisongs.com
Self selected learning – Free choice

iPad Plan

1. Which program will you be using?

2. What will you be learning, practicing, or researching?
   - Reading
   - Writing
   - Science
   - Math
   - Researching
   - Art

3. Will you be collaborating with a partner?
   - Yes
   - No
Engaged vs Passive

Time with adults still matters most


• Zero to Eight- Children’s Media Use in America 2013
  http://www.commonsensemedia.org/zero-to-eight-2013-infographic

http://safeshare.tv/w/NHNiLcs
FFA
Let’s talk about Apps

58% of the top 200 selling apps on iTunes in 2012 are for toddlers and preschool children (Nemeth and Simon 2012)
Be selective according to Simon & Nemeth

The Bad News – Most Early Learning apps or websites or software
– Have moderate entertainment
– Have low production value
– Have low education value
– Are redundant
– Are rote/skill based
Classification of Pedagogical Design

instructive  manipulable  constructive

Goodwin & Highfield, 2012 “iTouch and iLearn”
What are you wanting the children to learn?

- **Instructive** - drill and practice, only 1 specific answer, helps develop fluency, minimal cognitive investment, high intrinsic/extrinsic rewards “app” is in charge, includes content and specific skills - Attempt to avoid the Digital Pacifier

- **Manipulable** - encourages critical thinking, multiple responses, allows for choice, guided discovery, might have level of prompts included

- **Constructive** - child initiated, open-ended, high cognitive involvement, rewards are internalized, encourages creativity
Analysis by pedagogic design (Goodwin & Highfield, 2012)

85%  11%  4%

instructive  manipulable  constructive
App Type Examples

• **Instructive** – ABC Go, Squeeze (Everyday Math), Bugsy K Math, Peekaboo Farm, What’s That Sound

• **Manipulable** – Avokiddo Emotions, Dexteria Jr., Dexteria, Cookie Doodle

• **Constructive** – Drawing Pad, Puppet Pals, Sock Puppets, Draw for iPad, Felt Board, Toca Builder
Continuum of Pedagogical Design

Kate Highfield Page
Constructive Apps

• Educreations (Free)
  – Matt B. Gomez- Kindergarten Teacher-Texas

• Explain Everything ($2.99)
  – Matt B. Gomez- Kindergarten Teacher-Texas
    https://www.youtube.com/watch?v=GVhPai9Gq0o#t=11
Constructive Apps

• My Story- Book Maker for Kids ($3.99)


Video:
https://www.youtube.com/watch?v=ZL4okjOunhg

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Manipulable Apps

• **Toca Tailor** ($2.99)
  – [https://www.youtube.com/watch?v=28ljWcjWiHc](https://www.youtube.com/watch?v=28ljWcjWiHc)

• **Dexteria Jr.** ($2.99)
  – [https://www.youtube.com/watch?v=tIRjiOTG2jE](https://www.youtube.com/watch?v=tIRjiOTG2jE)
What to think about when selecting what to use according to Simon & Nemeth

• Fits your philosophy
• Fits the needs and interests of children
• Provides feedback, not praise
• Offers challenges through “leveled" experiences
• Offers more than rote, direct instruction
• Offers high interactivity
• Values learning over entertainment
• Does not include commercial temptation (in app purchases or advertisements) or inappropriate content
More and Free are not always better!

And @fssimon and I tell tchrs 20 free apps of low quality is NOT better than one great $5 app #storyappchat #ecetechchat
How can educators promote the use of technology..

• Encourage relationships – find tools/apps that encourage multi-user experiences and make sure an adult is available to be involved

• Active learning – open ended tools/apps that also promote problem solving

• Achievable challenges – tools/apps for ALL learners

• Follow interest – select tools/apps for the interests of all children

• Individualize – diversify your technology like any other educational tool

• Interact with each other – select tools/apps that encourage children to interact with each other – place devices in social areas of the rooms
Using Multi-Touch Devices to Support Learning

Teachers can help children use multi-touch devices to...

– facilitate conversation while observing photographs,
– engage in literature,
– develop skills in music,
– inspire creation in the arts,
– support brainstorming,
– create video books, and
– conduct research.

The Dos and Don’ts of Apps

Do not give

Praise

Do give

Feedback
The Dos and Don’ts of Apps

Don’t give

- Monotonous Repetition

Do give

- Repetition with novelty
The Dos and Don’ts of Apps

Don’t do this

Assume understanding

Do

Measure and Question
The Dos and Don’ts of Apps

Don’t use for

Busy Work, Worksheets, Flash Cards

Do use as

A valuable use of time with meaningful experiences
The Dos and Don’ts of Apps

Don’t use for

Replacement for something better done in real life

Do give

Experiences that help children learn and meet curriculum objectives
Where to find good Apps/Tech Resources

• Colleagues
• Appolicious
  www.appolicious.com
• Facebook/Twitter
  (#ecetech, #earlyed, #edapps, #ECE)
• Pbskids.org/mobile
• Children’s Technology Review
  www.childrenstech.com
  • http://PickyTeacher.com
• Apps for Children With Special Needs
  www.a4cwsn.com
• Technology in Special Education
• Common Sense Media-
  www.commonsensemedia.org
Screening for Quality Apps

• Checklist for Identifying Exemplary Uses of Technology and Interactive Media for Early Learning
  http://www.fredrogerscenter.org/blog/how-am-i-doing-checklist-exemplary-uses-of-technology-early-learning

• Considerations for Evaluating Apps- Pacific University
  http://fg.ed.pacificu.edu/cldc/tablets.html
Screening for Quality Apps

• Early Childhood Educational Technology Evaluation Toolkit

http://www.slideshare.net/HatchEarlyLearning/evaluating-technology-for-early-learners-form
There are so many, how do I choose?

• Use the evaluation guidelines questions
• Look for recommendations from colleagues
• If it’s free than download and play with it before you use it (you can always get the $ version if you like it) (Lite versions are often short versions and often free)
• Look at the date of the app
• Look at the 5 screen shots allowed by Apple
• Go to Apple support videos or You Tube displays
• Google/Search for the app name plus the word video (e.g. “Letter School App and video”)
Healthy Media Diet

Parenting in the Digital Age: Teaching Kids to Balance Their Own Media Diet – 3-7-14
http://digitalmediadiet.com/?p=3112
What do educators need to be successful with technology?

• On-going Professional development to include Playtime
• Pre-service preparation
• Hands-on opportunities to play
• Communities to practice together
• New and ongoing research
• Digital Citizenship for Educators
Other Resources

- http://fg.ed.pacificu.edu/elc/
- http://teccenter.erikson.edu/
- www.childrenstech.com
- http://bcis.pacificu.edu/home.php
- My Ele-
  http://ele.fredrogerscenter.org/
Other ways to incorporate technology into instruction

• Skypeanauthor.wetpaint.com
• Authors who Skype
• Wonderopolis.org - http://wonderopolis.org/
• Video/picture documentation (children do it) then make into own story using (Scribble Press or My Story)
Online resources

• NAEYC Technology and Young Children-
  http://www.naeyc.org/content/technology-and-young-children

• Empowering Preschool Quality (UNI-2006 Iowa Early Learning Standards, NAEYC, IQPPS) preschool videos
  http://www.uni.edu/coe/regentsctr/epq/

• www.Watchknowlearn.org

• http://www.ecetech.net

• www.pbskids.org

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

• Teaching Strategies, Inc. (Creative Curriculum)-Blogs- http://www2.teachingstrategies.com/blog/134-using-technology-in-the-classroom

• Teaching Strategies Inc. and You Tube-
  https://www.youtube.com/user/tsiwebmaster/featured
Webinars

- Teaching Strategies Inc.
- Simple K12
- Hatch Learning
References

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• Highfield, Kate (7/6/13) [http://appsineducation.blogspot.com/2012/03/early-childhood-education-and-ipad.html](http://appsineducation.blogspot.com/2012/03/early-childhood-education-and-ipad.html)
• NAEYC Institute for Early Childhood Professional Development (June 9, 2014)- *Integrating Digital Media Literacy and Technology into Early Childhood Standards and Practice*
• **Parenting in the Digital Age: Teaching Kids to Balance Their Own Media Diet – 3-7-14**  [http://digitalmediadiet.com/?p=3112](http://digitalmediadiet.com/?p=3112)
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Pop Corn Activity

• Select one of the sentence stems below to complete orally.
• I learned...
• I will...
• I believe...
• Stand up when you are ready
• Say your completed statement aloud (one at a time)
• Sit down when you finish
IPAD APPS BY CATEGORY
Apps for Behavior/Social Emotional

- Everyday Grooves*
- Model Me Going Places 2*
- Picture Card Maker*
- Avokiddo Emotions*
- Class Dojo*
- Visual Routine
- Choiceworks
- Reward Charts
- iModeling

https://www.youtube.com/watch?v=kgD3VD_Wlik

* Free apps
Apps/resources for Dual Language Learners

- 20 Welcome Words app
- Mama Lisa’s World website – translation website to help introduce words in different languages
- Ana Lomba website – stories translated into different languages
Apps for Math

• McGraw-Hill Squeeze*
• Series 1 (My First App)*
• Tiny Lotto Lite*
• Native Numbers Lite*
• Agnitus Games for Learning*
• Pattern Recognition Preschool
• Build It Up
• Montessori Numbers
• Montessori Geometry

• Park Math
• Find and Match 1-100
• Shapes
• Alien Buddies
• Bugs and Bubbles
• Numberland (Tam & Tao)
• GearedHD
• Bugsy K Math
• Odd 1 Out
• Toca Builders

* Free apps
Apps for Literacy

• Touch and Learn- ABC and 123*
• Rocket Speller*
• Sock Puppets*
• Letter School Lite*
• Sound Match*
• My A-Z *
• Reading Rainbow*
• Starfall ABCs
• PBS kids

• A My Name is Andrew (Digital book)
• ABC Spy
• Letter Sound
• Sounds (Different Roads to Learning)
• Shape-O- ABCs
• Sound Sorting Beginning Sounds
• Spot the Dot (digital book)

* Free apps
Apps for Motor Development

- Doodle Buddy*
- Singing Fingers HD*
- Draw for iPad*
- Letter School Lite*
- Squiggles (Lazoo) *
- Dexteria Jr. Lite*
- Out-A-Bout (Fred Rogers Center)*
- Touch and Write
- Draw and Tell HD—by Duck Duck Moose
- Pitch Painter
- Dexteria

* Free apps
Apps for Science and Social Studies

- Model Me Going Places*
- Weather Channel for Weather Helper*
- Alien Assignment*
- Haiku Deck*
- 30Hands*
- Marine Life*
- Explain Everything
- Things That Go Together
- Yummiloo Rainbow Power
- iModeling
- Noisy Bug Sing-a-long (digital book with insect sounds)

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