Educational Technology for Creativity, Collaboration and Community

Ben Bederson
Human-Computer Interaction Lab
University of Maryland
How Can ICT Help Education?

Information access
Distance education
Motivation
Differentiation
Extends learning day
Efficiency of learners
Efficiency of teachers

► Creativity
► Collaboration
► Community

Scale

Inspire learners
Increase capacity
Do meaningful work
“Once upon a time a huge tribe of cats lived in a remote village. A river divided the village in two. Black cats lived on one bank and blonde cats lived on the other... In summer and autumn, a black cat ruled the village and in spring and winter, a blonde cat ruled the village.”

-Black ears ... blonde ears (2002)
“I think you can hear me now. If you are all willing to **listen to each other**, we will be able to solve our problems. Only when you can do that will we be happy and able to **live in peace**.”

-Black ear ... blonde ear (2002)

in [www.childrenslibrary.org](http://www.childrenslibrary.org)

by Khaled Jumm’a, Illustrated by Foutinie Dedwase

The Tamer Institute for Community Education, Palestine
International Children’s Digital Library

research led by the UMD
now a non-profit foundation

3,000,000 unique visitors

150,000 pages of digitized books
100,000 visitors per month

books in 54 languages

website in 16 languages

www.childrenslibrary.org
Demo
Taiwanese teachers support working mothers & their children...

English taught as a 2nd language

ICDL books used to read/write their own stories

ICDL is tool for 2nd language acquisition
Romanian class translates books on bullies

half the class translates a book

the other half reviews translations

ICDL supports translation work & language acquisition
4-Country, 4-Year Study

- Children, teachers, librarians, parents in Honduras, Germany, New Zealand, USA participated

- Case study methods were used to understand how children changed in their attitudes towards books, technology & world views

- Reviewed hundreds of hours of voice, video, stories, etc. from children, their parents, teachers and librarians.
4-Country, 4-Year Study

- Children’s motivation to read was increased with the ICDL
- Children read more diverse books…
- Children’s confidence with technology increased…
- Children’s world view expanded…
Mongolia

• Working with Ministry of Education
• Funded by World Bank
• Adding digital access to traditional literacy project

• Phase I – Urban
• Phase II – Rural
• Phase III – Mobile
Laptops & ICDL

• First pilot now
• **Thousands of** laptops in schools
• ICDL on every laptop
Mobile Access

Why should information access be limited?
Desktop-only access is going away

International Children’s Digital Library [www.childrenslibrary.org](http://www.childrenslibrary.org)
Mobile Creativity

Mobile is a place not only for consumption

... of games
... of news
... of web pages
... of books

But also for creative expression

... call
... text
... and actually write stories

International Children’s Digital Library [www.childrenslibrary.org](http://www.childrenslibrary.org)
Mobile Creativity ≠ Desktop Creativity

Physical challenges:
• Tiny screen
• Poor text entry
• Low resolution drawing

And design challenges:
• Interruptible
• Short bursts of creativity
• Switching physical / virtual context

But physical context gives:
• Location
• Communication
• Sound
• Pictures
KidsTeam – Children as Design Partners
StoryKit: Mobile Authoring
Monster Attack!

It was just a normal day in the city of Seattle.

Until suddenly, a MONSTER arrived!

Suddenly, bolts of electricity were shooting from the creature's arms!

Fortunately, the Magical Flying Cow showed up with her Super Laser Vision and SAVED THE DAY!

The End.
Computational Thinking

- Don’t stop with language literacy

Easy entry
Media based
Syntax free
Encourages experimentation
Built in sharing
Collaboration – In The Classroom

Wikis
Let Students Teach Each Other

Try www.etherpad.com
Engage with Meaningful Activities
Idea: Study Vocabulary in the Real World
Idea: Study Vocabulary in the Real World

Creating web site

- Social
- Fun
- Integrates with classroom
- Driven by teacher
Idea: Let Construct Their Own Meaning

- Children not well served by existing dictionaries

- Define “the”:

  Definite article (used, esp. before a noun, with a specifying or particularizing effect, as opposed to the indefinite or generalizing force of the indefinite article a or an) – dictionary.com

  *def.art.* Used before singular or plural nouns and noun phrases that denote particular, specified persons or things: the baby; the dress I wore. Used before a noun, and generally stressed, to emphasize one of a group ...

  kids.yahoo.com/reference/dictionary

► *We looked at how children define words*
the

the sand
the furniture
the picture frame comes before
a lot of words

Soil

Water

Vegetation

Sand
Everybody

- all PEOPLE.
- OPPOSITE of nobody.
- A Noun

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Creating website that:

• Children create defn's
• Rate other defn's
• Get credit for participation
• Supports classrooms
• Engages volunteer moderators
• Integrates with ICDL
• Integrates with world bingo
Idea: Make Penpals Meaningful

Live website that:
• Creates partnerships
• Helps the donee
• But really for the donor

www.pinpartnership.org
Looking Forward

Computers are devices for:
► Retrieval of Information
► Creation of Information
► Communication
► Solving problems together

All the tools are here
Trust the learners
Start with your own creativity

We’re looking for partners:
► Books in more languages
► Broader deployment
► Further innovation

www.cs.umd.edu/~bederson
bederson@cs.umd.edu