



Digital Libraries for Children

University of Maryland

Allison Druin, PI

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Michele Platner, Lisa Sherman, Stacy Weng, Dana Campbell

between searching and browsing
connecting DL to presentation tool
of domain-specific data organization



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What we take for granted in Digital Libraries...



Keywords

"Keywords are the most important part of the metadata
and the most difficult to create."
- Dr. J. L. Taylor



Boolean
Query

"That's a hard game I think
my parents play."
- Joe, age 7



Metadata

"Metadata is the most important
part of the metadata."
- Dr. J. L. Taylor



"Special keys you find so that you can
win the game you're playing."

Alex, age 8

A yellow, torn-edge graphic that looks like a piece of paper or a sticker, positioned at the top of the slide. It has several black, irregular shapes on its top edge, resembling cutouts or holes.

"That's a board game I think
my parents play."

Joe, age 7

A large yellow decorative shape with a jagged, stepped left edge and a straight right edge, positioned at the top of the slide.

"Is that a kind of metal?"

Abby, age 7



Goals:

Understand the unique needs of children

established lab team of children

Develop new technologies

established school teams of children

develop prototype of 1 animal image
in a 4x6 February class set A
February 10th to 12th
develop initial visual query interface
develop multiple view support (M3D)

Evaluate the impact

we are currently testing the initial prototype
comparing it with paper search
measuring children's ability to search
for animals for categories of animals
we are researching differences between media
between age
between gender



children

▀ established lab team of children

• established school teams of children

Lab Team

- ▶ 7 children, 7-11 years old
- ▶ 3 teachers, 2nd/3rd grade
- ▶ interdisciplinary researchers
- ▶ design partners
- ▶ brainstormed new ideas

School Teams

- ▶ Yorktown Elementary School
 - ▲ 60 children in 2nd grade class
 - ▲ 60 children in 3rd grade class
- ▶ informants during design process
 - ▼ 2 children work with 1-2 researchers
- ▶ paper prototype feedback

new

- ▶ developed database of animal images from the Discovery Channel & Patuxent Wildlife Refuge
- ▶ developed initial visual querying interface
- ▶ developed multiple mice support (MID)

impact

- ▲ we are currently testing the initial prototype comparing it with paper search measuring children's ability to search for animals & for categories of animals
 - ▲ we see searching differences between media between age between gender
- 

What have we learned?

➤ About children?

- combining design methods with children
design partners in lab
informants/testers in schools
- children don't just want to look for information
they want to use it too
- combining 2 query items is easy for kids
(7-8 yrs. old) with our 25+ prototype

➤ About DL technology?

- queries need to be concrete (query kids)
visual
direct manipulation
- difference between searching and browsing
- importance in connecting DL to presentation tool
- importance of domain-specific data organization

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children?

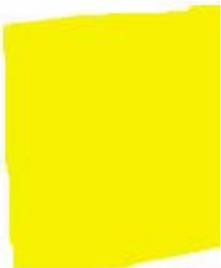
- ▶ combining design methods with children
design partners in lab
informants/testers in schools
- ▶ children don't just want to look for information
they want to use it too
- ▶ combining 2 query items is easy for kids
(7-9 yrs. old) with our 1st prototype

technology

- ▶ queries need to be concrete (query kids)
 - visual
 - direct manipulation
- ▶ difference between searching and browsing
- ▶ importance in connecting DL to presentation too
- ▶ importance of domain-specific data organization



What's Next?



- ▶ Multi-user navigation and searching
 - ▶ Add video, sound, and text to prototype
 - ▶ Incorporate query results into search screen
 - ▶ Further develop browsing interfaces
 - ▶ Connect DL with presentation tool (KidPad)
 - ▶ Evaluate use of new prototype features
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What's Next?

- Multi-user navigation and searching
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- Evaluate use of new prototype features

What have we learned?

About children?

Research on children's information needs and search behavior

About DL technology?

Research on digital library technology and user experience

Digital Libraries for Children

What we take for granted in Digital Libraries

Keywords

Boolean Query

Metadata

Goals:

- Understand the unique needs of children
- Develop new technologies
- Evaluate the impact

<http://www.cs.umd.edu/hcil/kiddiglib>