

Web Interfaces to Support Children's Information-Seeking Activities



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Abstract

- This presentation addresses the topic of designing Web interfaces to support children's information-seeking activities. It begins by briefly describing children's current use of the Web to locate information and recent efforts on the part of researchers to provide improved support for those activities. Next, it examines selected Web sites designed specifically to meet the information needs of children, communicates research findings related to the effectiveness of such Web sites, and suggests recommendations for improvements based upon those findings. Finally, the presentation proposes a set of heuristics for evaluating the effectiveness of interfaces for Web sites intended to assist children in finding information.

Introduction

- Children are making greater and greater use of the Web for educational and entertainment purposes both at school and at home. The past few years have seen the widespread entry of the Internet into schools and classrooms around the world. Since its entrance into the classroom, the Internet has come to be used increasingly as an information resource for class projects. The use of the Internet as an educational resource has spawned interest among researchers from a variety of disciplines (education, library science, human-computer interaction, and so forth) in exploring ways to improve the design of Web sites intended to support children in their information-seeking activities. This research has included: conducting usability studies with children, conducting focus groups with children, and actively involving children as team members in the design of interfaces for Web-based tools intended for their use.

Web Sites for Children

- The next few slides feature a brief description and accompanying snapshot of several representative Web sites designed specifically to support children's information-searching activities.
- Selected Web sites:
 - Yahoooligans!
 - <http://www.yahooligans.com/>
 - A browsable, searchable directory of Internet sites for children aged 7-12 that allows children to search for information using keywords
 - Provides resources for education as well as entertainment

Yahooligans! The Web Guide for Kids - Netscape

File Edit View Go Bookmarks Tools Window Help

http://yahooligans.yahoo.com/

Home My Netscape Search

Netscape Enter Search Terms Search Highlight Pop-Ups Blocked: 9 Form Fill Clear Browser History

YAHOO! LIGANS!

the Web Guide for Kids

Sunday April 24, 2005 [? Help](#)

- Games
- Animals
- Music
- TV
- Science
- Cool Sites
- Jokes
- Movies
- E-Cards
- News
- Horoscopes
- Reference

Yahooligans! Games

[Feeding Frenzy](#)

It's survival of the biggest in this action-packed challenge. Chomp your way to the top of the food chain as you swim underwater and fight off predators. Can you unseat the vicious Shark King? [Download now!](#)



News Slideshow



[Grab Bag](#)

Yahooligans! Poll

Q. Do you celebrate Passover?

Yes

No

[submit my vote](#)

[view results without voting](#)

Search

Yahooligans! Directory

 Around the World Countries, U.S. States, Holidays...	 School Bell Lang. Arts, Math, Social Studies...
 Arts & Entertainment TV, Movies, Jokes, Music...	 Science & Nature Space, Animals, Dinosaurs...
 Computers & Games Games, Screensavers, World Wide Web...	 Sports & Recreation Basketball, Football, Outdoors...

Joke of the Day

What has five eyes and sleeps on a waterbed?

Answer!

Ask Earl

Web Sites for Children

- Selected Web sites, continued:
 - Ask Jeeves for Kids
 - <http://www.ajkids.com/>
 - A directory and search engine based on natural language that lets children find answers by typing in questions in conversational English
 - Focuses on learning and "edutainment," according to their Web site

Ask Jeeves Kids - Netscape

File Edit View Go Bookmarks Tools Window Help

http://www.ajkids.com/

Home My Netscape Search

Netscape Enter Search Terms Search Highlight Pop-Ups Blocked: 9

Privacy Policy • About • Help • Parents • AJKids' Books

FUN & GAMES

NEWS RESOURCES

Ask Jeeves KIDS
AJKids.com

Just type in a question and click Ask!

For example: "How does a guitar work?"

PEEK at what kids are asking right now!

Where can I find out about the alligator?

STUDY TOOLS
Click on the books below for Study Help in these areas-

- DICTIONARY
- THESAURUS
- ALMANAC
- BIOGRAPHY
- SCIENCE
- CLIP ART
- ASTRONOMY
- WORLD ATLAS
- MATH HELP
- HISTORY

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 ASK JEEVES is a registered trademark of Ask Jeeves, Inc.
 ASK.COM, ASK JEEVES FOR KIDS, ASK JEEVES KIDS, the ASK button, and the JEEVES DESIGN are service marks and trademarks of Ask Jeeves, Inc.
 All other brands are property of their respective owners. Patent pending.

Connecting to www.ajkids.com...

Web Sites for Children

- Selected Web sites, continued:
 - KidsClick!
 - <http://sunsite3.berkeley.edu/kidsclick!/>
 - A directory and search engine created by a group of librarians at the Ramapo Catskill Library System that provides children with default as well as advanced search options
 - Default search options
 - » Support searching all fields or Web addresses only
 - » Support basic keyword searches as well as advanced keyword searches that allow truncation and Boolean operators (see snapshot in slide 9)
 - Advanced search options
 - » <http://sunsite.berkeley.edu/KidsClick!/search.html>
 - » Provide additional support for searching subjects, titles, and descriptions, as well as limiting search results to specified reading level(s) and quantity of pictures (see snapshot in slide 10)
 - Features Web sites that children in grades K-7 will find entertaining or enlightening

KidsClick! Web Search - Netscape

File Edit View Go Bookmarks Tools Window Help

http://sunsite3.berkeley.edu/kidsclick!

Home My Netscape Search

Netscape Enter Search Terms Search Highlight Pop-Ups Blocked: 9



KidsClick!

web search for kids by librarians

Search Lessons
More Search Tools
Picture Search Tools
Sound Search Tools

About KidsClick!
Privacy Policy
Selection Criteria
Submit a Site

Search word(s): Search - or, [Advanced Search](#)

All fields Web address only

Search our 600+ subjects by letter: [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Z](#)

 <p>Facts & Reference Encyclopedias, Dictionaries, Trivia, News, Holidays, Calendars, more...</p>	 <p>Science & Math Animals, The Environment, Space, Natural Disasters (including Tsunamis), Math, Experiments, Dinosaurs, more...</p>	 <p>The Arts Drawing, Coloring, Art Museums, Music, Art by Children, Musical Instruments, more...</p>
 <p>Weird & Mysterious Ghosts, ESP, Monsters, Aliens, Disappearances, more...</p>	 <p>Health & Family Medicine, Disabilities, Family Life, Exercise, Parenting, more...</p>	 <p>Popular Entertainments Rock Music, Movies, Cartoons, Toys, Celebrities, more...</p>
 <p>Religion & Mythology Christianity, Judaism, Islam, Wicca, Religion (General), Mythology, more...</p>	 <p>Home & Household Food, Pets, Hobbies, Crafts, Gardening, Babysitting, more...</p>	 <p>Sports & Recreation Team Sports, Games, Camping, Fishing, Olympics, Horsemanship, Martial Arts, more...</p>
 <p>Society & Government Law, Schools, Politics, Military, Business, Minorities, Organizations, more...</p>	 <p>Machines & Transportation Cars, Inventions, Spacecraft, Planes, Trains, Robots, more...</p>	 <p>Literature Stories, Poetry, Humor, Individual Authors, Books, Jokes, Book Series, more...</p>
 <p>Reading, Writing, Speaking Grammar, Foreign Languages, Spelling, Composition, Vocabulary, Writing, more...</p>	 <p>Computers/The Internet Software, Programming, Internet, Key-Pals, Computer Games, Online Games, more...</p>	 <p>Geography/History/Biography Countries, American History, Biography, States, World History, Folklore, more...</p>

What does this page look like through a [Librarian's Eyes?](#)

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<http://www.kidsclick.org/>


KidsClick! Web Search - Netscape

File Edit View Go Bookmarks Tools Window Help

http://sunsite.berkeley.edu/KidsClick!/search.html

Home My Netscape Search

Netscape Enter Search Terms Search Highlight Pop-Ups Blocked: 9



KidsClick!

web search for kids by librarians

Advanced Search

Search word(s): dinosaur

Search: ALL fields Subjects Titles Descriptions

Limit results by: Grade 3-6 Many pictures

- Chop off words using an asterisk (*) to find all variations of a word: [alien*](#)
- Use the word **or** to find all items with either one word or another: [alien* or extraterrestrial](#)
- Use the word **not** to eliminate words: [hurricanes not hockey](#)

OR,

Search URL:

All of these example searches will work:

- [sunsite](#)
- [sunsite.berkeley.edu](#)
- [http://sunsite.berkeley.edu/London/](#)

Copyright © 1998, All rights reserved.
Document address <http://sunsite.berkeley.edu/KidsClick!/>
Created by a bunch of librarians. [Read more about us!](#)
This page updated December 1, 1998, database updated daily.

KidsClick! was initiated under a Federal Library Services and Technology Act (LSTA) grant obtained by the [Ramapo Catskill Library System](#). LSTA funds administered by the New York State Division of Library Development. Additional support provided by the [Berkeley Digital Library SunSITE](#).

Web Sites for Children

- Selected Web sites, continued:
 - NASA Kids
 - <http://kids.msfc.nasa.gov/>
 - A flashy but somewhat sophisticated site that aims to “inform, inspire and involve children in the excitement of science and space exploration,” according to their Web site
 - Provides support for basic keyword searching
 - Pages linked to the main page also provide access to an index and glossary

NASA KIDS - a nasa site dedicated to kids - Kids of all ages! - Netscape

File Edit View Go Bookmarks Tools Window Help

http://kids.msfc.nasa.gov/

Home My Netscape Search

Netscape Enter Search Terms Search Highlight Pop-Ups Blocked: 9

NASA NEWS:
 Sunday, April 24, 2005
Have you seen NASA.gov?
 Where can you go to find out everything that there is to know about NASA and to get even more activities and games? www.nasa.gov/

NASA KIDS

Stories by NASA Kids

Solar Flare
 by FUTUREASTRONAUT

Search GO

Club House

Teacher's Corner

[If the animation is too slow, or you can't see it, click here.](#)

[Privacy Statement](#)
 Responsible Official: Jim Fruit

edspace.nasa.gov

Read kids.msfc.nasa.gov

Research on the Effectiveness of Selected Web Sites for Children

- Bilal (2000, 2001, and 2002) and Large, Beheshti, and Rahman (2002) investigated the information-seeking activities of children using Web sites designed specifically for their use. Large and his colleagues focused on issues related to interface design, whereas Bilal focused on issues related to support for information-seeking. The Web sites they studied included three of the four just discussed:
 - Ask Jeeves for Kids
 - KidsClick!
 - and
 - Yahoooligans!

Research on the Effectiveness of Selected Web Sites for Children

- A summary of the primary findings of the four studies (Bilal, 2000, 2001, and 2002; Large, Beheshti, and Rahman, 2002) indicates:
 - The children preferred Web sites that used bright colors, graphics, and animation.
 - The children condemned the use of advertisements in Web sites.
 - The children liked Web sites that offered entertainment opportunities alongside educational opportunities.
 - The children liked Web sites that used vocabulary appropriate for their age group.
 - The children preferred Web sites that provided browsable subject categories alongside keyword search facilities. Although Yahoologans! provides both these options, Bilal (2000, 2001, 2002) found that children had difficulty using the Yahoologans! search engine/directory, mainly because of its poor support for keyword searching.

Suggested Improvements for Selected Web Sites for Children

- Ask Jeeves for Kids
 - The children recommended using more color and graphics, responding more quickly to the initial question posed to Jeeves, and including subject categories.
- KidsClick!
 - The children recommended adding bright colors, more graphics, and some animation; they also suggested adding “fun stuff” to supplement the school-related content.
- Yahooligans!
 - As this was one of the more popular sites, suggestions for improvements were minimal. Some of the boys did recommend providing different interfaces for different age groups, however.

Heuristics for Evaluating Web Interfaces for Children

- Based on the research reviewed in the preceding discussion, I propose the following set of heuristics for evaluating the effectiveness of interfaces for Web sites designed specifically to support children's information-seeking activities:
 - Use a simple but consistent design.
 - Use eye-catching colors, graphics, and animation.
 - Use vocabulary appropriate for the target age group.
 - Provide both educational and entertaining content.
 - Provide support for searching by keyword or browsing by subject category.
 - Make minimal (if any) use of advertisements.
 - Assign the Web site a name that is fun and relevant to its goals.
 - Assign the Web site a URL that is easy to remember.

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