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Helping Children Find What They Need on the Internet

By [STEFANIE OLSEN](#)

When Benjamin Feshbach was 11 years old, he was given a brainteaser: Which day would the vice president's birthday fall on the next year?

Benjamin, now 13, said he [typed the question directly](#) into the [Google](#) search box, to no avail. He then tried [Wikipedia](#), [Yahoo](#), [AOL](#) and Ask.com, also without success. "Later someone told me it was a multistep question," said Benjamin, a seventh grader from North Potomac, Md.



Daniel Rosenbaum for The New York Times
To make Web searches easier, Benjamin Feshbach's idea is a Google robot.

"Now it seems quite obvious because I'm older," he said. "But, eventually, I gave up. I didn't think the answer was important enough to be on Google." Benjamin is one of 83 children, ages 7, 9 and 11, who participated in a study on children and keyword searching. Sponsored by Google and developed by the [University of Maryland](#) and the Joan Ganz Cooney Center, the research was aimed at discerning the differences between how children and adults search and identify the barriers children face when

trying to retrieve information.

Like other children, Benjamin was frustrated by his lack of search skills or, depending on your view, the limits of search engines.

When considering children, search engines had long focused on filtering out explicit material from results. But now, because increasing numbers of children are using search as a starting point for homework, exploration or entertainment, more engineers are looking to children for guidance on how to improve their tools.

Search engines are typically developed to be easy for everyone to use. Google, for example, uses the Arial typeface because it considers it more legible than other typefaces. But advocates for children and researchers say that more can be done technologically to make it easier for young people to retrieve information. What is at stake, they say, are the means to succeed in a new digital age.

“We’re giving them a tool that was made for adults,” said Michael H. Levine, executive director of the Cooney Center at Sesame Workshop, a nonprofit research center in New York focused on digital education for children. Allison Druin, director of the human-computer interaction lab at the University of Maryland, suggested expanding the concept of keywords. Instead of typing a word into a search box, children could click on an image or video, which would turn up results.

Ms. Druin said that parents played a big role in helping children search. She proposed that search engines imitate that role by adding technology aids, like prominent suggestions for related content or an automated chat system, to help children when they get stuck.

Children’s choices of search engines differ only slightly from the preferences of adults. Google ranks most popular among children, followed by Yahoo, Google Image search, [Microsoft](#)’s Bing and Ask.com, according to the research firm Nielsen. (Among adults, Bing is ahead of Google Image.)

Irene Au, Google’s director of user experience, said that rather than develop a specific product for children, her team used research findings to inform how it could improve search for all ages. “The problems that kids have with search are probably the problems adults experience, just magnified,” Ms. Au said. “It’s helped highlight the areas we need to focus on.”

For example, Google has long known that it can be difficult for users to formulate the right keywords to call up their desired results. But that task can be even more challenging for children, given that they do not always have the right context for thinking about a new subject. One 12-year-old boy searching for information about Costa Rica used the search term “sweaty clothes” because that was what he associated with the jungle.

“If we can solve that for children we can solve that for adults,” Ms. Au said.

One way Google aims to overcome that problem is by showing related searches. Ms. Au said Google had tried various placements since related searches were introduced in 2007 and had found that it could be helpful to introduce such queries — or other content like video, images or news — at the bottom of the page.

A search on the word dolphins, for example, shows a set of related searches, (sharks, bottlenose dolphins) and two [YouTube](#) videos of dolphins at play. Ms. Druin called the bottom of the screen “valuable territory” because children often focus on their hands and the keyboard when they search and see that space first when they glance up.

Stefan Weitz, director of Bing, said that for certain types of tasks, like finding a list of American presidents, people found answers 28 percent faster with a search of images rather than of text. He said that because Bing used more imagery than other search engines, it attracted more children. Microsoft says Bing’s audience of 2- to 17-year-olds has grown 76 percent since May. “My daughter who’s 5, her typing skills aren’t great, but she can browse images of various dog breeds through visual search,” Mr. Weitz said.

In May, Google introduced Wonder Wheel, a graphical search tool aimed at making browsing easier. (To find it, click on “show options” on a page of search results; it appears halfway down the left column.) For a search on “apple,” the wheel shows prongs pointing to “apple fruit” or “apple store locator” in the left panel.

Children also tend to want to ask questions like “Who is the president?” rather than type in a keyword. Scott Kim, chief technology officer at Ask.com, said that because as many as a third of search queries were entered as questions (up to 43 percent on Ask Kids, a variant designed for children), it had enlarged search boxes on both sites by almost 30 percent.

In September, Google also increased the length of its search box and the size of its font for related searches. Google said the change was meant to enhance ease of use for everyone.

Future trends in search may also be helpful to children. The move toward voice-activated search like the Google voice search on iPhones and Android phones and

audio and video search will prove beneficial to children with limited abilities, experts say.

Benjamin Feshbach, who's now considered a power searcher, has his own ideas.

"I think there should be a program where Google asks kids questions about what they're searching for," he said, "like a Google robot."