Progress Report: Potential Online Research Tool
Rebekah Judson

Overview
Thus far, I've put together a spreadsheet outlining the online research tools currently available for K-16 students. Within the spreadsheet, I've listed these tools based on “type” (i.e. comprehensive tools, search tools etc), “target age group,” “web-based/non-web-based,” “major features,” “price,” “what works,” and “what doesn’t work.”

I tried to focus on tools that provided a range of services to students, but did include some that focused on only one aspect of the research process (e.g. search, note-taking) if I thought the ideas behind the tool were unique or valuable. I did not include tools that merely expedited the citation process.

Some of the tools listed were specifically designed for students, while others were intended for a more general or professional audience. Of the comprehensive tools surveyed (those that provide a range of services), 2 were created for a general audience, 6 for college students and adults, 4 for college and high school students, 2 for middle and high school students, and 2 for elementary and middle school students (including eLibrary Elementary).

Some tools I was unable to evaluate fully as I have not yet received a license for a trial version of these tools.

Evaluation Criteria
While evaluating the positive and negative aspects of each tool, I focused primarily on these questions:

• How does this tool aid students in stages of the research process that might be challenging or unwieldy?
  Examples of such stages include:
  • defining and organizing preliminary ideas
  • locating and evaluating resources
  • sifting through data
  • tracking the research process
  • managing resources
  • note-taking and note organization based data found
  • applying data found to a paper or other presentation of findings
• How easy is this tool to use? How intuitive is its interface?
• How appropriate is this tool for its target age group (or for students in general, if not designed for students)?
• How appropriate is this tool for academic research (if not designed specifically for this purpose)?

For college and high school students, the tools that seemed most compelling and generally well designed were Zotero, Eduify (though I wasn’t able to test this tool), Lumifi, and NoodleBib. For elementary and middle school students the best tools seemed to be NoodleBib and eLibrary.

Common features
High school/college:
  --Capturing, storing, and organizing a variety of types of sources
  --Annotating sources and linking notes to search history
  --Searching within sources
  --Sharing research/other social networking capabilities
  --Citation support
Elementary/middle school:
--Databases of specific content
--Search guidance within these databases
--Topic directories/editor-created content/timelines
--Less sophisticated organizational capabilities
--Limited citation support

**Brief Analysis/Next Steps**

While there do appear to be a number of online research tools available, I still think it would be valuable to gather information from students as to their research habits/experience with tools and consult some secondary literature and ongoing studies in order to more accurately evaluate whether the creation of a new tool would be valuable.

Drawing on my own experiences and observations, I think that there are key elements of the student research process which are not fully addressed by the various tools available, especially on the high school/college level. While there may be less resources currently in use for younger students, these students are presumably more likely to perform research with heavy classroom guidance from an instructor and are much less likely to need the volume of information necessary for high school and college research. For this reason, resources such as eLibrary or World Book, which provide students with confined databases in which to search and editor-generated content for context, seem generally appropriate to the research process for these students (though this is something that could also benefit from further evaluation).

For high school and (especially) college students, however, research is much more likely to be done independently, making tools a more essential part of their process. What can often separate these students from other types of researchers (e.g. academics, professionals) is that students are frequently asked to do research about topics in fields that are largely unfamiliar to them, making it difficult to know how to begin the research, how to define a research path, as well as how to identify a topic's essential concepts and vocabulary before delving into more complicated ideas. The progress report of Project Information Literacy, an ongoing study of research habits in college students, addresses many of these ideas in more detail. In general, I did not feel that these questions of “framing” research for students were addressed to a great extent within the tools surveyed.

As such, I think it would be valuable to seek out more information from students and secondary sources that shed light on these questions.

**Resources/Current Research**

Should it be useful to consult secondary sources or current research, here are some sources on online research habits amongst students or recommendations for the teaching of online research within schools (I haven't really looked into any of these sources in-depth, it's just an initial list):

Project Information Literacy--ongoing study on research habits amongst college students: [http://projectinfolit.org](http://projectinfolit.org) (See “Publications” for Progress Report, videos)

Information Literacy Blog: [http://information-literacy.blogspot.com/](http://information-literacy.blogspot.com/)

Student surveys: [CIRP Freshman Survey](http://www.cirlp.org/cirp/)
"Easing Our Download Overload," Jerry Large, Seattle Times, August 7, 2008. Based on conversation with Mike Eisenberg.


Bray, O. Search party [Part of a special section entitled ICT]. The Times Educational Supplement (January 9 2009 TES Magazine supp) p. 28

Broken Links: Undergraduates Look Back on their Experiences with Information Literacy in K-12 Education. School Library Media Research, 11, 1.


Hoctor, M. Accessing information: The Internet--A Highway or a Maze?. Gifted Child Today (Waco, Tex.: 2000) v. 28 no. 3 (Summer 2005) p. 32-7, 65


Mokhtari, K., et. al., Assessing the New Literacies of Online Reading Comprehension: An Informative Interview With W. Ian O'Byrne, Lisa Zawilinski, J. Greg McVerry, and Donald J. Leu at the University of Connecticut. The Reading Teacher v. 62 no. 4 (December 2008/January 2009) p. 354-7

Reisz, M. Hits and misses. Times Higher Education no. 1848 (June 5-12 2008) p. 32-7

Safford, B. R. How to Help Students Handle the Information Overload. School Library Media Activities Monthly v. 23 no. 2 (October 2006) p. 33-4


Selwyn, N. An investigation of differences in undergraduates’ academic use of the internet. Active Learning in Higher Education v. 9 no. 1 (March 2008) p. 11-22

Tarrant, J. What you've been looking for [Part of a special section entitled ICT]. The Times Educational Supplement (November 14 2008 TES Magazine supp) p. 26-7

Tenopir, C. Teaching Student Searchers. Library Journal (1976) v. 130 no. 4 (March 1 2005) p. 33
Tu, Y. W., et. al., Eighth graders' web searching strategies and outcomes: The role of task types, web experiences and epistemological beliefs. Computers & Education v. 51 no. 3 (November 2008) p. 1142-53

Valenza, J. Substantive Searching: Thinking and Behaving Info-Fluently. Learning and Leading with Technology v. 32 no. 3 (November 2004) p. 38-43
