Paula Sandridge
Kathi Trimble
EDU 510: Curriculum:Trends and Issues
Group Paper
7/30/03

Internet Literacy

Internet Literacy is a term that has become more important as the expectations of technology proficiency increase with today's students. This paper will examine two important facets of Internet Literacy, the development of searching and questioning skills and the critical evaluation of information retrieved from the Internet.

First, several definitions of what is meant by Internet Literacy may shed some light on the topic. "Our concept of literacy has been based on the assumption that print is the primary carrier of information in our culture and that the most important skills are those that enable students to understand and express themselves in text. The new definition of literacy is based on a different assumption: that digital technology is rapidly becoming a primary carrier of information and that the broader means of expression this technology makes possible are now critical for education. Text literacy is necessary and valuable, but no longer sufficient." (Meyer and Rose 2000) In simpler terms, Yahooligans defines Internet Literacy as, "The ability to use the Internet to search for information, to find clues on web pages in order to evaluate the content, and to follow rules for gathering and presenting information." (Yahooligans 2002)

Years ago, students learned how to locate information that was available in the library by understanding the Dewey Decimal system, using the card catalog, and knowing the layout of the local library. If the source of the information, usually a book or journal, was not available, the librarian would take a name and pertinent information about the source and would mail a postcard to the student when the document was ready to be retrieved. If a student needed help in locating an item, someone was usually available to

assist on the spot. Today, students have much more information available to them. In addition to the print and media resources at the school and local libraries, students have instant access to over a billion websites with a few clicks of a mouse. Alan November, an internationally respected consultant in integrating technology across the curriculum, states that for today's young people, the Internet is the "… dominant media of choice, replacing television and print." "Understanding the grammar of the Internet, just as we do with print media, is the first step in helping students to be more astute and careful about how they interpret information on the World Wide Web." (November 2) The American Library Association (ALA) and the International Society for Technology Education (ISTE) also agree that students must be proficient at retrieving, analyzing and using information for a variety of sources, including digital content. These groups have identified the following standards for students relating to Internet literacy:

> ***Information Literacy Standards***
> 1.4 identifies a variety of potential sources of information
> 2.4 selects information appropriate to the problem or question at hand
> American Library Association (2003)
>
> ***National Educational Technology Standards***
> 5.1 Students use technology to locate, evaluate, and collect information from a variety of sources.
> 5.3 Students evaluate and select new information resources . . . based on the appropriateness for specific tasks.
> National Educational Technology Standards for Students (2002)

"The ability to search for information online is one of the most basic digital literacy skills." (Salpeter 23) How can teachers best prepare their students to find reliable information in a relatively short amount of time? Students are already tech-savvy; do they know how to use the Internet to find good information? Often, teachers themselves do not

understand the process of locating good information on the web, so the chances are good that their students don't either.

Dr. Jamie McKenzie, well-known director of libraries, media and technology, suggests, "Successful searching and efficient electronic investigations must rest upon a carefully developed, structured foundation of information literacy skills that would include solid questioning, prospecting, translating and inventive abilities. Best practice now suggests the need to equip students with skills and structures before they drive the electronic highway." (McKenzie 17) "The answers … lie in the ability and willingness of adults to teach students practical and usable methods for exploring the Internet, making meaning, and gaining a proper perspective on what they encounter there. We must teach strategies for using the Internet so they gain perspective on the meaning of the sites they access." (November 3)

So how do search engines actually work? Are all search engines equal? Do they all work in the same way and give the same results? No, they do not. Therefore, students must be taught how the various types of search engines work, and when it is appropriate to use each type. There are similarities and differences between search engines. "Search engines search databases of several different Internet directories to give users results that are not always sorted in the same way. (November 14) "All search engines do keyword searches against a database, but various factors influence the results from each." (Kansas City Public Library 2002) Google reports results by popularity, including ranking a site according to the number of inbound links to the page, the more links, the more likely a page is to be of interest to you (Machrone 53). Size of the database, frequency of update, search capability and design, and speed may lead to amazingly different results. In addition, some search engines filter their content [for appropriateness]; such as AskJeeves

for Kids, KidsClick and Yahooligans, while others do not; such as Ask Jeeves, Hot Bot, Alta Vista, Lycos, Yahoo, Google and Excite. There are also metasearch sites or metacrawlers that send searches to several search engines. Since metasearch engines do not allow for input of many search variables, their best use is to find hits on obscure items or to see if something is on the Internet. Some of the best-known ones are Dogpile, Mamma, Metacrawler, and SavvySearch. (Kansas City Public Library 2002)

Luckily, the Internet provides a multitude of tutorials on how to conduct effective searches using a variety of search engines, as well as activities geared for school children. If planning to use the web for research, teachers should plan to include a few lessons on conducting Internet searches before 'letting the kids loose' on the Internet. Teachers themselves need to have a firm grasp of how search engines work before using them with their students.

Another key component of Internet literacy is being able to critically evaluate the source and content of a web site. The amount of information that is available on the Internet is tremendous, and it grows rapidly every day. Therefore, being able to evaluate the information presented on web pages is a necessity for adults and students. The five major criteria used to evaluate websites are accuracy, authority, objectivity, currency, and coverage (Beck 2003).

Accuracy can be defined as information being reliable and error-free. The Internet is used frequently for research and information. If that information is inaccurate, it is useless. Because there are no standards out there that people are held to, anyone can publish and post information on the Web. Resources that are in print have editors, whereas resources that are up on the Web rarely have people checking to make sure the information is accurate and reliable. One way to check for accuracy is to determine who

wrote the page. If it is a good site, contact information should be given in case the reader has further questions for the author (Schrock 1998). Checking the authority of the source is another way to see if the information found is accurate or not.

Authority deals with the author of the page. A good Web sitesite will have an author listed and an easy way to find out their credentials. However, just because there is an author does not always mean that the information can be trusted. Qualifications of the author, if one is even listed, are rarely given. A way to check an author's qualifications is to type their name into a search engine and see what type of information, if any, comes up about them. When there is no author listed, looking at the URL domain might determine its origin. Most sites ending in .gov, .org, and .edu can be considered reliable (Valenza 2002). Another way to evaluate the credentials of the author is to do a "link check." Valenza (2002) says, "In either Alta Vista or Google, perform the following search: **link:putURLhere**." The results you get will show who else has linked to the page you are trying to evaluate. Look to see if those pages are reputable and if they offer a review of the page you are evaluating.

Even if a site is considered to have accurate information and have a reputable author, there could be *objectivity* issues. A lot of times a Web page can be used as a commercial or an opinion page. A good thing to do is to ask yourself why the page was written and for whom was it written (Kapoun 1998). Look at the page to try to determine the goals and objectives of the page and see how detailed the information is. Also, look for the use of persuasive words. When a Web site uses a lot of persuasive language there is usually bias information presented (Schrock 2002).

Another important criteria to consider when evaluating Web pages is the *currency* of the information. Most good sites will have a spot that will tell the viewer when the

page was created and when it was last updated. Obviously, information from years ago may not be as reliable as current information. If there is a date given but no specific information with it, that date could represent one of three things. It could represent when the material was first written, when it was first placed on the Web, or when it was last revised (Beck 2003). When checking for the currency of the site, the links provided within the page should also be checked. There should be no expired, or "dead" links. If there are "dead links," that tells you the author does not frequently update and verify their information.

 Coverage of the Web page is also important. The links provided on the page should not only be current, but they should also complement the information available on the Web site. Correct citations should be used by the author when presenting information used from other sources. (Kapoun 1998).   When the information is cited, it tells you the author was not plagiarizing, and it allows you to cross-check the information presented to make sure it is accurate.   Some other things when evaluating the coverage of a Web site are important. There should be a balance of text and graphics, and the graphics should complement the text on the Site. It should be easy for you to navigate through the Web site, and specific browser technology or software should not be needed in order to do that.

 Just because a Web site does not meet all of the above criteria perfectly, it does not mean the site is useless. If there are parts of the site that can be proven reliable, then it can be used. Keep in mind the purpose for using the information and determine whether it fits your needs or not.

 Although the Internet contains a vast amount of wonderful resources, there are some issues to address. Many parents, teachers, and administrators are worried about

what young people may encounter while using the Internet. School systems are understandably wary when it comes to unfettered Internet use for students. Systems may install specialized software on their networks to block certain content, but it is not teaching students to be judicious consumers of the information found on the net. Filtering the content of Web sites is a short-term solution and may give a false sense of security to teachers, students, and parents. Unfortunately, filters don't totally block inappropriate or incorrect sites from entering the network. Once the student goes home and gets on the Web, he still will need to know how to judge a good site from a bad one. So it makes sense that we teach students as much as possible about Internet Literacy, so they can be wise consumers of this wonderful resource.

Since the Internet has been around, it has been much easier for students to conduct research. However, by using the cut and paste feature, it has also been an easy way for them to turn in work that is not their own. There is software out there that can be used to detect *plagiarism*, but teaching the skills associated with Internet Literacy to children at young age can also help to prevent plagiarism from occurring. On her Web site, *Internet Plagiarism: Strategies to Deter Academic Misconduct*, Hricko emphasizes the need to teach students how to evaluate websites more critically. She says that students are doing research on the web and quoting information that could have potentially been plagiarized. If they were able to evaluate Web sites effectively and understand where the information came from, it would prevent them from using false information and eliminate the urge to plagiarize.

Another issue regarding Internet Literacy is the reluctance of some educators to allow their students to have access to the systems at school before they (the teachers) have learned more about it. This reluctance may be understandable if we think of

"Teachers as 'digital immigrants'. They are not born to the world of technology, but have had to adapt to it. Students, on the other hand, have grown up with it and are more apt to play with it, use it, and be comfortable with it." (November 38). Teachers have also felt a need to learn something before presenting it to their students, but November suggests that we may have to abandon that paradigm when it comes to technology. He suggests that we allow the students to take on a mentoring or teaching role as both learn about technology. There is not enough time, or opportunity, for teachers to learn all about technology in order to teach the students, so learning together may be a better strategy for all (November 38).

Looking ahead to the not-too-distant future, the Internet will be available 24/7 in a very small, fast, inexpensive pocket-sized device. Students will be able to access it at any time, from anywhere. Our job, as educators, is to make sure that our students learn how to use the Internet to find information, judge it for validity and reliability, and use it meaningfully in a variety of contexts.

Resources:

American Library Association. (2003). The Nine Information Literacy Standards for Student Learning. Retrieved July 27, 2003, from http://www.ala.org/aasl/ip_nine.html

Beck, S.E. (2003, June 10). *Evaluation Criteria*. Retrieved July 21, 2003, from http://lib.nmsu.edu/instruction/evalcrit.html

Hricko, M. Internet Plagiarism: Strategies to Deter Academic Misconduct. Online Available: http://www.mtsu.edu/~itconf/proceed98/mhricko.html

Kansas City Public Library. (2002). Introduction to Search Engines. Retrieved July 27, 2003, from http://www.kclibrary.org/resources/search/intro.cfm

Kapoun, J. (1998, September 18). *Five Criteria for Evaluating Web Pages*. Retrieved July 21, 2003, from http://www.library.cornell.edu/okuref/webcrit.html

Machrone, B. (June 30, 2003) Has Google Ruined the Web? PC Magazine, 22(11), 53.

McKenzie, J. (1999). How Teachers Learn Technology Best. Bellingham: FNO Press.

Meyer, A., & Rose, D. H., (2000). Learning to read in the computer age [Online]. Retrieved July 18, 2003, from http://www.cast.org/udl/index.cfm?i=66

National Educational Technology Standards for Students. (2002). Technology Foundation Standards for All Students. Retrieved July 27, 2003, from International Society for Technology in Education Web Site: http://cnets.iste.org/students/s_stands.html

Salpeter, J. (March, 2003). Web Literacy and Critical Thinking: A Teacher's Tool Kit. Technology and Learning, 23(8), 22-34.

Schrock, K. (2002, July). The ABCs of Web Site Evaluation. *Classroom Connect.* Retrieved July 18, 2003, from http://school.discovery.com/schrockguide/pdf/weval_02.pdf

Schrock,K. (1998). Separating the Wheat from the Chaff: How to Tell the Good Sites from the Bad [Electronic Version]. *Internet Trend Watch for Libraries*, March.

Yahooligans. (2002). Teaching Internet Literacy. Retrieved July 27, 2003, from Yahooligans Web Site: http://www.yahooligans.com/tg/overview.html

Valenza, J. (2002, February). Evaluating Web Resources. *Classroom Connect Newsletter*. Retrieved July 21, 2003, from http://www.classroom.com/community/connection/connectednewsletter/evaluating.jhtml