Teaching Media Literacy in the Age of the Internet

The ABCs of Web Site Evaluation

The online world is quickly becoming a source of primary information for both teachers and students. Considering the enormous amount of information available online and that about 75% of all K-12 schools have Internet access, students and teachers need to be able to critically evaluate Web pages for authenticity, applicability, authorship, bias, and usability.

Unlike the media center, there are no media specialists to sort out the valuable information from the substandard information. With more than 350 million documents available on the Web alone, finding relevant information online can be daunting. Therefore, the ability to critically evaluate information is an invaluable skill in this information age.

The acquisition of digital literacy skills is dependent upon the student's ability to find information, determine its usefulness and accuracy, and utilize it effectively. What follows are 26 criteria that enable teachers and students to assess every Web page the Net has to offer.

Authority When we look at Internet information with a critical eye, we want to know the basis of the author's authority. Some filters we can employ are:
• Is the author a well-regarded name you recognize?
• Does the online document contain a biography and an email address?
• Did you link to this site from a site you trust?
• Are you led to additional information about the author?
http://www.amazon.com

Bias Biased sites contain words that try to persuade rather than inform. Some of these words include over-generalizations and simplifications and may also contain games, giveaways, contests, or celebrity endorsements intended to persuade. Some things to think about include:
• Is it clear what organization is sponsoring the page?
• Is there is a link to the sponsoring organization's Web site?
• Is the page actually an ad disguised as information?

Citations If the author of a site includes a source bibliography, students can consult these sources to find additional information about the topic and compare the author's content with other works. If the author leads the user to related sources, it allows the student to evaluate the author's scholarship. Citations should be full citations to allow students to locate the book or periodical at the library.

Dates Every credible Web site includes the date that it was created and the date of last update. Another date that may be important to your students is the date the data was collected. Students need to ask themselves if the information they are looking for is from an area that demands more current information. In this case, the date of last update is an important feature to look for.

Efficiency If you plan to use a site with a large group of students, it is important to try it at all times of day. Some sites get very busy at midday and may slow down your lesson. If there are large graphics on the page, make sure the page resides in your cache to speed up the download time. If you are planning a major lesson around a site, the best idea is to ask permission from the site's author and use WebWhacker or WebBuddy to retrieve the entire site or a portion of it to your computer.
http://www.bluesquirrel.com/whacker/
http://www.dataviz.com/products/webbuddy/

Fallacy As with print material, one thing that may happen on a Web site is that the information presented may be used out of context. Citations allow students to research the original

document and become familiar with the surrounding text. Another event that occurs on the Web that is unique to hypertext systems is the ability to jump into a Web site at any point. Students should be encouraged to find the "top" of the Web site and read the author's purpose and rationale for providing the information.

Graphics As bandwidth shrinks and becomes a precious commodity, more attention needs to be focused on the graphics that are included on a Web site. Aclearly labeled graphic is worth a thousand words when illustrating a point. Graphics should aid students in reaching the desired objectives for using the site and should serve a clear purpose for the intended audience.

Handicapped Access In this day of the graphical browser, the statement that a page should be usable via a text-based browser is often disregarded. Visually impaired users may utilize a screen reader to read the Web page, and it is important that there be text available and text alternatives for the graphics software to "read."

Information Availability Tell students that a particular piece of information might not be available online because firms who pay to create and disseminate information are unlikely to provide this information free of charge. Also tell students that keeping information up-to-date is costly.

Jerry-Built *Webster's Dictionary* defines jerry-built as "built poorly, of cheap materials." When evaluating a site, students need to understand that a page that contains multiple spelling and grammatical errors may have been thrown together. There is one exception: If the native language of the Web site designer is not English, spelling and grammar inconsistencies should be overlooked.

Knowledge Before researching online, students should have working knowledge of the topics they are pursuing. This allows students to relate how the new information compares with what they already know about the subject.

Links Students should also try to find out if a site is meant to be comprehensive in scope or is just an overview or sampler of links. The links should be appropriate for the site's intended audience and also offer something that is not available at any other online destination.

Misinformation Students need to realize some of the sources of misinformation on the Net, which include the fact there is nothing to stop a Web page author from modifying the text at any time; the use of opinion verbs and appeals to emotion may indicate bias; and there are many jokes and pranks on the Net.

Navigability AWeb page should be designed for easy navigation. Links should be easy to identify and grouped in

"Digital literacy is the ability to understand and use information in multiple formats from a wide range of sources when it is presented via computers."

— Paul Gilster

some type of logical order. Students should be able to tell at first glance how a site is organized and the options available. An added bonus is the inclusion of a keyword search function.

Online Research Models There are numerous research models available that are applicable to the online research process. They all have things in common including the formation of the research question, the planning of the search strategy, the gathering of information, and more.

Pertinent Central to the online research model is the need for students to know when to disregard information. With the amount of information available, it is imperative that students learn how to evaluate whether the information that they find is pertinent to their purpose. This begins by having students clarify their objectives before they begin the research process.

Quantity of Information Some Web sites continue to grow in size every day. With the interactive nature of the Internet, some sites solicit input, examples, and stories from others. If this type of site meets the students' needs, they should be reminded to visit it regularly to keep up-to-date. Having students practice extensive searches on topics that they are familiar with will help them realize the most effective way to find information and help them eliminate some of the frustrations of the over-abundance of information.

Requirements Some sites have certain requirements for use. Students should learn to exercise caution if they are asked to submit registration information at a site. Another annoyance is the use of proprietary software (plug-ins or players) that forces the user to access the site using a specific Internet browser. When evaluating a Web site to use for instruction, be aware that, if it was designed for one browser or the other, it may not be presented properly. All Web pages should be designed with the world's two most popular browsers in mind: Netscape Navigator and Internet Explorer. (See our October 1998 Newsletter cover story for more information.)

Scholastic Reviews There are many Web review columns in professional periodicals that list and describe Web sites of value. Use these reviews to choose sites to support instruction. There are many awards given on the Net, and you should use caution when choosing sites because they have won awards. Oftentimes, awards are created to build up visits to the site of the awarding page. One way to determine if a site is scholarly in nature is to see what type of sites have linked to it. This type of Internet search can be conducted using both HotBot and AltaVista.
http://www.hotbot.com
http://www.altavista.com

HotBot employs a drop-down menu to search for links to individual sites, while AltaVista allows users to type **link:<URL>** in its search box. Try this example with AltaVista. In the search box at the top of the home page, type the following:

link:http://www.classroom.com

Theorists The major educational tenets of noted theorists still remain viable in the online world. Whether it is Eisenberg and Bekowitz (The Big Six), Robert Marzano (Dimensions of Learning), or Bernie Dodge (WebQuests), sound educational theory should be the basis of all learning, including online research.

http://big6.syr.edu
http://www.mcrel.org/products/dimensions/whathow.html
http://edweb.sdsu.edu/webquest/webquest.html

By having students take the information that they find and make conscious, educated decisions about what to use and how to structure it, they gain the higher-order thinking skills necessary for lifetime learning in an information-rich society.

Uniqueness The Web has many unique characteristics that are not present in the print world. Marsha Tate and Jan Alexander describe marketing-oriented Web pages, Web pages that blend entertainment, information, and advertising, and software requirements that limit access to information as some of these unique characteristics.

http://www.science.widener.edu/~withers/webeval.htm

Verifiable Whenever possible students need to verify Internet information in a reputable print source. If no citations are included, the student needs to conduct further research to determine the validity of the site's content.

Evaluation Web Sites

Critical Evaluation Surveys
http://www.capecod.net/schrockguide/eval.htm

Evaluating Internet-Based Information: A Goals-Based Approach
http://www2.ncsu.edu/unity/lockers/project/meridian/feat2-6/feat2-6.html

WWW CyberGuide Ratings for Content Evaluation
http://www.cyberbee.com/guide1.html

Evaluating the Quality of Internet Information Sources
http://itech1.coe.uga.edu/faculty/gwilkinson/criteria.html

Evaluation of World Wide Web Sites: An ERIC Digest
http://ericir.syr.edu/ithome/digests/edoir9802.html

Bibliography on Evaluating Internet Resources
http://refserver.lib.vt.edu/libinst/critTHINK.HTM

ED's Oasis Evaluation Guidelines
http://www.edsoasis.org/guide2.html

The Five W's As with any investigative reporting, students can easily apply the five W's to simply evaluate a Web site: Who wrote the pages and are they an expert in the field? What does the author say is the purpose of the site? When was the site created, updated, last worked on? Where does the information come from? Why is the information useful?

Xtra information Tate and Alexander have also designed evaluation instruments for different types of Web pages. They contend that different criteria need to be examined for the different types of pages.

http://www.science.widener.edu/~withers/webeval.htm

Yahoo! Information in a general-purpose directory such as Yahoo! has been filtered and organized to produce a browsable, keyword-searchable index of a portion of the Net's Web destinations. Students should take advantage of these directories to get an overview of what is available on the Net as they formulate their search strategies.

http://www.yahoo.com

Search engines are useful only when students have gained their background knowledge, identified key terms, and learned effective search strategies. There is much more information available through search engines than directories, and as long as students have a clear strategy in mind, the number of results returned should not be overwhelming.

http://www.search.com

Zen In a 1995 issue of *Computers in Libraries,* Kirk Doran writes about what the Internet is not. He contends that, since the Internet cannot be searched all at once or seen in its entirety, the usual method of matching one type of question with one type of source does not work. He feels, due to the fact that the Net is not run by one company, it lacks the organization and consistency we are accustomed to in print, and the navigation is not consistent.

http://www.stlcc.cc.mo.us/lsdocs/internot.htm

Finally, Paul Gilster's definition of digital literacy can be summed up in a single phrase: "the ability to understand and use information in multiple formats from a wide range of sources when it is presented via computers."

http://www.december.com/cmc/mag/1997/oct/bunz.html

If we strive to teach students the best way to critically evaluate the information that they find in relation to the purpose at hand, we will produce a generation of digitally literate adults who are equipped to learn throughout their lifetimes. In the end, is this not the greatest lesson we can teach today's students?

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