

Taming the Wild Web: Using Web Sources To Your Best Advantage

Description:

Using a hands-on group activity, class discussion, and student demonstration, this lesson teaches students how to critically evaluate information found on the web. Students will evaluate a sample web site and seek additional information in order to verify that site. Wikipedia will be used as one corroborative tool, and Wikipedia's own validity and reliability will be examined. Finally, students will gain a brief introduction to the library's databases through the use of LexisNexis as an additional verification tool.

This lesson has been used as part of a fourteen session, one-credit information literacy course. It also serves well as a single session on web evaluation. Since the lesson uses the DHMO (dihydrogen monoxide) hoax site as an example, it is particularly relevant to chemistry, biology and environmental studies students. The evaluation skills presented, however, will be useful to students in all disciplines.

Goals & Objectives:

Upon completion of this lesson, students will:

- Understand the major criteria used to evaluate the quality of a web site and the site's appropriateness for their information needs.
- Have hands-on practice evaluating a web site.
- Understand how Wikipedia works as well as its advantages and shortcomings.
- Be able to think critically about appropriate uses for Wikipedia and other web sites.
- Recognize the need to verify and corroborate information found on the web.
- Know how to verify and corroborate information found on the web.

Materials & Sources:

Equipment/Software Needed

- Instructor's computer station with projection capabilities
- At least five student computer terminals
- Internet connection and browser access on all computers
- Subscription to LexisNexis News or another news database

Time Required

- 1 hour, 20 minutes for full outline (but the session can easily be pared down to 55 minutes by eliminating the steps labeled "if time permits.")

Procedures:

Web Page Evaluation

- Hand out the Web Page Evaluation Checklist (attached) and briefly review its criteria with students.

- Break students up into five groups. Assign each group a section of the Web Page Evaluation Checklist (Author/authority, Intent, Intended audience, Currentness, or Reliability) to use in evaluating a sample site.
- The students will evaluate the Dihydrogen Monoxide (DHMO) Research Division web site (<http://www.dhmo.org/>). write the site's URL on the classroom whiteboard (if available), open the site on the instructor computer, and instruct students to open a web browser and go to the site. Students will apply the criteria outlined in their assigned section of the evaluation checklist to analyze the DHMO site. Encourage students to dig into the site, follow links, and look for clues as to the nature, purpose, and reliability of the site.
- Provide approximately 5 minutes for students to work on their analysis.
- Discuss the students' results. Go group by group and ask students what they thought of the site based upon their analysis. Ask them to identify the "clues" that helped them form their opinion of the site (or better yet, ask them to come to the instructor's terminal to point out these clues for their classmates).

Corroboration and Wikipedia

- Explain that we will now look for outside information to corroborate the DHMO site. Go to Google and type in "Dihydrogen Monoxide" (students may follow along on their computers). The first Google result after the DHMO site itself is a Wikipedia entry for "Dihydrogen monoxide hoax." Open the site and let students browse through the article. They will be amused to discover that the DHMO site is a hoax and that dihydrogen monoxide is simply water.
- Ask students if they think Wikipedia can be trusted as a legitimate source of information on this or any topic. Students will often have an opinion about Wikipedia based upon previous experience and/or warnings from their teachers and professors. Discuss the nature of wikis (written by users, easily edited, content changes regularly) and the contribution/editorial policy of Wikipedia (http://en.wikipedia.org/wiki/Wikipedia:About#Contributing_to_Wikipedia).
- Ask students how Wikipedia fares under the scrutiny of the Web Page Evaluation Checklist (if time permits, students may regroup and apply their section of the checklist to evaluating Wikipedia's DHMO page). Be sure that students are aware that they can click on the "Discussion" and "History" tabs in a Wikipedia entry to get a sense of how many people have worked on the entry, when it was last updated, and whether there has been any disagreement or controversy about its content.
- Ask students if it is possible to identify the author/s of a Wikipedia entry. What about the author's credentials or affiliation? Following links in the "Discussion" or "History" tabs will occasionally lead to this information. Ask a student to come up to the instructor's terminal and walk him/her through the following demonstration:
 - In the DHMO entry's "History" tab, click on the hyperlinked username of a recent editor. Show students that some editors will supply information about

themselves. If an editor claims affiliation with a certain university, organization or research body, go to that institution's web site and see if you can verify the editor's affiliation.

- DHMO editor "DavidWBrooks" is a good example for this demonstration. Brooks claims to be a newspaper reporter in New Hampshire. This can be verified in LexisNexis News. Ask the student volunteer to open LexisNexis news, go to the guided search, select "U.S. News" then "New Hampshire News Sources." Type "David Brooks" into the first search box and change the drop down menu to "Author." Change the date range to "All available dates" and search. Several articles by David Brooks will appear, from a paper called The Telegraph. If time permits, The Nashua Telegraph can be found on the web and the existence of reporter David Brooks can be further verified on the site itself.
- By clicking on several other Wikipedia editor links, students will see that this level of verification is often simply not possible. Many Wikipedia entries are written anonymously or by editors whose identities can't be verified. That being the case...
- Ask students when and for what purposes Wikipedia might be an appropriate information source. Suggestions:
 - For entertainment and trivia
 - For background information
 - For help in selecting topics and keywords for further searching
 - To identify references to other, higher quality corroborating sources

Following Web Citations to Their Original Sources

- One point in Wikipedia's favor is that it usually includes references and other outside links which serve to cite and verify the information provided. Note that this is something that students should always look for in informational web pages. Click on some of the references in Wikipedia's DHMO entry to show how they help verify the information provided in the entry.
- Click on the last link in the entry, "Dihydrogen Monoxide: Unrecognized Killer - 1997 Washington Post News Service commentary" under "News stories, commentary." Ask students if they trust this source. Why/why not? Point out that although the article claims to be from the Washington Post, a look at the url shows that the page resides not on the Washington Post site, but on a site called "Junk Science." Is there any way to verify that this article is indeed from the Washington Post?
- Students may wish to visit the Washington Post web site (<http://www.washingtonpost.com>); if time permits, let them try to find the article on the Post site. Savvy students might know to use the archive search, but even if they find a match, they will not be able to access the article in full-text for free.
- Ask students to open up LexisNexis News and try to find the purported Washington Post article. (From Guided News Search, choose "U.S. News," then "Southeast Regional Sources." Enter "dihydrogen monoxide" in the first search box, then "Glassman" in the second; change the drop down menu to "author." Finally, select the date range 1997 to

1997. The Glassman article will appear in the search results.) This exercise will verify that the article, indeed, comes from the Washington Post.

- Encourage students to use this technique to verify citations in Wikipedia and other web pages. Encourage them also to track down and use original source documents whenever possible.
- Ask students why they should take the time and energy to verify references. If they have any doubts, remind them of the “telephone game” (the first person in a chain quietly whispers a message to the next, the next repeats it to the next, and so on; by the time the message reaches the last person in the chain, it has been distorted). If time permits, play a round! As the game reveals, messages can be changed and distorted, by accident or purposeful intent. Each reprinting of an article or other source can introduce errors. The original source is the most reliable and therefore should be traced and used whenever possible.

Conclusion

Summarize the session for students. Point out that:

- They should keep the criteria outlined in the Web Page Evaluation Checklist in mind as they are searching and using the web. Demand that a web site prove itself before accepting and using the information it presents.
- Use Wikipedia, but with skepticism and caution.
- Dig into websites in order to evaluate them. Follow links, look for sections labeled “about us,” “mission,” etc.
- Always attempt to verify information found on the web. Look for citations and acknowledgements. Use other sites, encyclopedias, library databases, professors, and any other trusted resources at hand to verify a site’s content, especially when using the site for academic work.
- The library’s subscription databases aren’t just excellent verification tools. Often they are the ideal starting place for student research since their content comes from quality journals and magazines.

Assessment:

A review of students' subsequent works cited lists/bibliographies prepared for the course in which the lesson was delivered will often reveal students understanding and integration of the lesson's content. Have students included reliable web sources? Whenever possible, have they traced information back to its most reliable source?

Collaborators:

The web page evaluation checklist was adapted from a checklist developed by John Cosgrove, Access Services/Humanities Librarian, Lucy Scribner Library, Skidmore College

Web Page Evaluation Checklist

Name of page: _____

Address/URL: _____

Date Accessed: _____

How did you find the page? _____

(Example: linked from another site, search engine, recommended by friend, etc.)

DOMAIN

What is the domain of the page?

Example: .com, .net, .org, .edu, .gov

Do you feel that the domain type helps add to or lessen the page's credibility?

Notes: _____

AUTHOR/AUTHORITY

Is the author of the page identified?

- Is the author of the page an individual? (ex. John Jones as the author of his own website)
- If no individual author is identified, is the corporation, institution, organization or group responsible for the web site clearly identified? (ex. Skidmore College is the institutional author of the Skidmore College website; individual authors of individual pages may not always be identified on the Skidmore site)

Notes: _____

If the author is an individual:

- Is the author clearly affiliated with a corporation, institution, organization or group?
- If so, does this affiliation lend credibility to the author?
- Are the author's educational, occupational or other credentials identified?
- Is the author a professional in the field or a layperson interested in the subject?
- Does the author present any other evidence that supports his/her ability to accurately present the information that he/she is presenting?
- Does the author display any obvious bias (religious, political, commercial or other)?
- Is the author the original creator of the information presented?
- If not, does the author acknowledge the sources of the information he/she is presenting?

AUTHOR/AUTHORITY, cont.

- Does the author provide his/her contact information (usually an e-mail address)?
- In conclusion, do you feel that the author is qualified to present the information found on his/her web page?

Notes: _____

If the author is a corporation/institution/organization or other group:

- Does the organization have a reputation for credibility?
- Does the organization explain its purpose, mission, goals, or guiding principles?
- Does the organization provide the names of its officers, editors, staff or other major participants?
- Does the organization provide contact information (phone, address, or at least an e-mail address)?
- Does the organization appear to filter the information appearing under its name?

- Does the organization display any obvious signs of bias?
- In conclusion, do you think that this organization is qualified to present the information found on its web page?

NOTES:

INTENT

Is the purpose of the page clearly stated?
(You may be able to determine the purpose of a page by looking at sections titled "About Us", "Mission", "Mission Statement", "Objectives" or something similar.)

What is or appears to be the purpose of the page?

For example, to:

- Inform (ex. new information, current events, etc.)
- Explain (ex. describe a process, teach, etc.)
- Persuade (ex. change your mind, convince you to buy, etc.)

Does the page contain advertisements? Do the ads distract from the page's content, affect the page's reliability, or appear to be the main focus of the page? Might they be necessary to support the organization responsible for the page?

NOTES:

INTENDED AUDIENCE

Who appears to be the intended audience for this information/page?

For example:

Elementary school students	People with arthritis
Researchers	
College students	
Self-help enthusiasts	Shoppers

Does the level or complexity of information provided, the vocabulary used, and the overall tone of the information/page match your needs?

NOTES:

CURRENTNESS

When was the information on the page created or last updated?

Are the dates of articles, news stories, newsletters, reports and other publications given?

Is the page properly maintained or does it have broken links, outdated events calendars or other signs of neglect?

NOTES:

RELIABILITY

Is the content peer-reviewed, authenticated by experts, or subject to some sort of editorial scrutiny?

(In the peer-review system used by scholarly journals, submissions must be reviewed by experts in the field; after their uniqueness, value to the discipline and reliability are favorably reviewed, they may be published in the journal)

Does the page display any awards given by reliable sources, or link to favorable site reviews by reliable sources?

Considering your answers to the previous questions, other observations you've made, and your overall sense of the page, how reliable does this source seem?

NOTES:

CONCLUSIONS

Do you feel that this source is appropriate for your current assignment or information need?

Would you recommend this source to a friend doing similar research?

What reservations, if any, do you have about the source?

ADDITIONAL NOTES:
