Criteria for Evaluating Internet Resources

The following checklist presents questions to ask to help determine whether a Web page is a suitable resource for a research paper, or not. Don't expect to be able to answer all the questions, all the time, for all Web sites you look at. Rather, try to use the questions as a tool to help you look at Web pages critically.

AUTHOR/SOURCE

- Is there an author of the work? If so, is the author clearly identified?
- Are the author's credentials for writing on this topic stated?
- Is the author affiliated with an organization?
- Does the site or page represent a group, organization, institution, corporation or government body?
- Is there a link back to the organization's page or a way to contact the organization or the author to verify the credibility of the site (address, phone number, email address)?
- Is it clear who is responsible for the creation and/or maintenance of the site or page?

Why Question the Author or Source of a Web Page?

It is important to ask these questions because often we are taught to believe that what we read in a magazine or book, or on the Web, is true. This is not necessarily the case. If you cannot find an author or an organization connected to a website be very, very suspicious. If no one wants to stand behind the creation of the page why should you believe what is written there? Even if you can find an organization or author you still need to be cautious and make sure that the organization and/or author are who they say they are. This may include further research on a particular author or organization.

ACCURACY

- Is this page part of an edited or peer-reviewed publication?
- Can factual information be verified through footnotes or bibliographies to other credible sources?
- Based on what you already know about the subject, or have checked from other sources, does this information seem credible?
- Is it clear who has the responsibility for the accuracy of the information presented?
- If statistical data is presented in graphs or charts is it labelled clearly?

Why Question the Accuracy of a Web Page?

In terms of quality control, the world of traditional print publishing and the Internet bear little resemblance to each other. In the scholarly publication process, there are a number of steps an article goes through before editors and referees decide whether or not to publish it. When an author submits an article an editor can assign it to two, sometimes as many as four, independent referees. This is called the peer-review process. The referees review the article and write reports that recommend acceptance, acceptance with minor changes, acceptance with major changes, or rejection. Final acceptance rates are about 30%, and the entire process can take up to a year. It used to be possible to say that in *general* on the Web there are no editors (unlike most print publications). But now it is possible to find many edited documents and peer-reviewed e-journals available on the Web. It could be said though, that there are few editors *of* the Internet. There is no system in place, for the entire Internet, for people to proofread and "send back" or "reject" a document until it meets the standards of a publishing house's reputation. This lack of review and revision process means that not all Web pages are reliable or valuable. Documents can easily be copied and falsified, or copied with omissions and errors - intentional or accidental.

Articles from journals, magazines and periodicals are becoming increasingly available through the Internet. The table below shows some of the characteristics of scholarly and popular journals. Not all the criteria will be met for every journal, and there will be exceptions, but being aware of the differences will assist you to select sources appropriate to your research needs.

	Scholarly Journals	Popular Journals
Examples	Journal of the American Medical Association (JAMA) Water, Science and Technology	Time Newsweek Psychology Today

Authors	Researchers Professors Scholars Professionals who are usually experts in narrow fields	Journalists Lay people Anonymous
References	Includes references, bibliographies or footnotes	Rarely includes references, bibliographies or footnotes
Edited by?	Submitted articles are subjected to a rigorous peer-review process by researchers, professionals and/or students of the field	Submitted articles may be reviewed by journalists and lay people
Language	Specialized language of the discipline is used Often includes tabulated data, graphs and diagrams	Language is non-technical
Contents	Always includes an abstract Lengthy articles of original research In-depth analysis of topic Substantial book reviews	Shorter articles of general interest Coverage of current events/news Some brief book reviews
Presentation and Graphics	Less flashy, more "serious" in appearance Advertisements are rare (an exception is medical journals) Articles are often divided into explicitly named (and sometimes numbered) sections	More eye-catching appearance Many pictures Many advertisements
Where Indexed?	Found in specialized indexes such as Anthropological Index Georef Medline	Found in general periodical indexes such as Academic Search Elite Canadian Periodical Index Reader's Guide Abstracts (But keep in mind that general periodical indexes also include scholarly materials)

Sloppy or poorly put together graphs or charts should be regarded with suspicion. Not only is such information difficult to use, it is also inconsistent with quality research from a credible source and should lead you to suspect the accuracy of the information on the page.

CURRENCY

- Is there a date stating when the document was originally created?
- Is it clear when the site or page was last updated, revised or edited?
- Are there any indications that the material is updated frequently or consistently to ensure currency of the content?
- If there are links to other Web pages are they current?

Why Question the Currency of a Web Page?
Currency of information is particularly important in the Sciences as findings can change drastically in short periods of time. How current the Web page or site you are looking at is relevent because if you are going

to use information from a site you want to know that the information is updated or revised if necessary, or at the very least that the page is looked at and maintained by the webmaster with some consistency. The date showing the currency of a site is usually near the bottom of the page.

If links to other Web pages are not current this is a fairly good sign that the site is not well-maintained.

OBJECTIVITY

- Is the page free of advertising? If the page does contain advertising, are the ads clearly separated from the content?
- Does the page display a particular bias or perspective? Or is the information presented factually, without bias?
- Is it clear and forthcoming about its view of the subject?
- Does it use inflammatory or provocative language?

Why Question the Objectivity of a Web Page?

If advertisements are present, look for a relationship between the content of the page and the advertising. Are the advertising and content connected? Ask yourself if the sponsors of the advertisements could have sponsored the research reported on a Web site. For example, you find a Web page about a vitamin supplement and the page has advertisements flashing over it, selling the same health supplement. Be cautious and sceptical that the content of the page is without bias. Make sure that the information is factual, not just testimonials of satisfied 'customers'. Check other sources to verify the information. Look closely at how information is presented. Are opinions clearly stated, or is the information vague? It is acceptable for a page to present a biased opinion, but you as the consumer of the information should know what that opinion is, it should be clear, not hidden.

COVERAGE

- Is there any indication that the page is complete and is not still under construction?
- If there is a print equivalent to the Web page, is there clear indication of whether the entire work or only a portion is available on the Web?

Why Question the Coverage of a Web Page?

If there is any indication that the page is still under construction it may be better not to use it, as aspects of the page, as well as the information on it, may change by the time it is finished. If you find an excellent page and feel you simply must use it, but it is still under construction, it may be a good idea to include that fact in your bibliography. Your professor may see a different page than the one you referenced by the time you hand in your finished paper. If you are looking at a Web page for which there is a print equivalent check to see if the entire work is on the Web page. If it is a portion of the work, the make sure the quotes are not taken out of context or information has not been misrepresented.

PURPOSE

- What is the primary purpose of the page? To sell a product? To make a political point? To have fun? To parody a person, organization or idea?
- Is the page or site a comprehensive resource or does it focus on a narrow range of information?
- What is the emphasis of the presentation? Technical, scholarly, clinical, popular, elementary, etc.

Why Question the Purpose of a Web Page?

If the primary purpose of the Web site is to sell a product make sure the information is not biased if you are thinking of using it for a research paper.

If the primary point is to have fun, or parody a person or organization you may not want to use it as a reference for a research paper, unless your paper has to do with Web site hoaxes.

If a site or page is not comprehensive, and focuses on a narrow range of information it might be still be useful, just remember to look at the page critically. If a page has a narrow focus try to make sure that relevant information has not been left out.