

## VI. Evaluate Research Materials

### 1. Criteria to Evaluate Research Materials in Biological Sciences:

After you have located various materials on your topic, you should evaluate them to determine their usefulness, quality and authority. Keep in mind that evaluating the information you have located is one of the major skills of the library research process. In evaluating information in the field of Biological Sciences, you should apply the ten criteria below:

a. Author's qualifications or credentials—Is the author practicing in the field? Is he an authority in the field? How many articles or books has he written on the topic?

b. The timeliness of the publication—Is information timely or out-of-date for your topic? When was the information created? Check the publication dates. Is the information updated, and if so, how often is it updated? Some information is updated daily, some weekly and monthly. Is the information still valid for your topic? If you need the most current information then timeliness is a must for you. But if you are looking for a historical perspective, then timeliness may not be crucial.

c. Accurate and factual information supported by evidence-- Does the information you have located come from authoritative sources? If the information came from a journal in a database, is the journal refereed? Refereed journals or publications are ones which contain information reviewed by experts in the field. Is there a review about the book you will use as a source? How thoroughly is the information edited and reviewed? If you obtained the information from a web site, how stable or permanent is the information? Is the coverage of your topic complete? To find the answer, you should check the table of contents, index, or abstract. Are factual statement well documented or footnoted so you can verify them for accuracy

d. Primary vs. Secondary Sources- You can locate your information from two types of materials:

Primary Sources: These are the first hand or eyewitness accounts of an event. They include newspaper articles, reports of experiments, statistics, government documents, autobiographies and letters.

Secondary Sources: These are the sources that analyze, relate, evaluate or criticize based on information gathered from primary sources.

e. Reputation of the publisher—Check out the publisher of the source. If the publisher is a university press then it is likely to be scholarly. Even though you can't always guarantee quality based on the publisher's reputation, it may be a sign that the publisher has a regard for the type of sources it publishes. For example, Cambridge University Press, Elsevier Press, John Wiley and Sons and Blackwell Science are scholarly publishers in the science fields.

f. Type of Publication—is the source scholarly, popular, trade or government? Is the journal scholarly or popular? You need to make a distinction because it indicates different levels of complexity in introducing ideas.

### Scholarly Journals

The articles in these journals always cite their sources in the form of footnotes or bibliographies. The authors of these articles are scholars in the field. The language used is discipline related. Scholarly journals report on original research or experimentation and disseminate it for scholarly use.

### General Interest and News Publications

Articles contained in these sources may be written by members of the editorial staff, or free lance writers. The language used is directed to the general public. These publications are produced by commercial entities, individuals and/or professional organizations.

### Popular Journals

These sources, attractive in appearance, contain photographs and drawings. The articles do not cite sources and are generally short. These journals are designed to entertain. Some examples of these include People Weekly, Good Housekeeping, Essence, and Southern Living.

### Sensational, Tabloid Publications

These publications use elementary language that is often sensational. It aims to arouse curiosity with flashy headlines. Some examples are National Inquirer, Globe, Weekly World News, Star, and others.

## 2 Criteria to Evaluate the Web Resources

You can find a vast amount of information on the Internet, however, not all resources are equally valuable or even reliable. Your challenge is to sift through the vast amount of information and pinpoint those sources that are reliable and relevant for your topic. As a rule informational web pages present factual information. For example, the web pages with URL addresses that end with .edu or .gov provide reliable information since they are sponsored by educational institutions or government agencies. You may consider the following points in evaluating web sources:

- a. **Scope-** How complete is the information covered? Is the information given in detail?
- b. **Content-** Is the information accurate or factual? Does it reflect the opinion of the author? Does the author list his/her sources for verification? Is the information biased? Does the information clearly provide the name(s) of person(s) or organizations responsible for the content of the information? Is the author qualified to provide the information? Is the information current? Are there dates as to when it was written and when it was last revised or updated? Are there links to other related resources? If so, are they up-to-date? Is the text well written and communicated clearly?
- c. **Graphics and Multimedia Design-** Is the page attractive and interesting?
- d. **Navigation-** is the web resource easy to use? Is it user friendly? Can you retrieve the resource via standard computer equipment and software?