Print, Web and Electronic Databases

The goal of this module is to:
Implement an effective literature search strategy using print, web and electronic databases

Upon successful completion of this module, you will be able to:
• Identify main sources of information
• Explore formats and tools for finding information
• Examine purposes of market research and literature reviews
• Develop a literature/internet search strategy
• Organize search information using tools and applications
• Evaluate search information
What is a literature review?

• A literature review is a synthesis of the literature that describes what is known or has been studied regarding the particular research question or hypothesis.

• The literature review is guided by the variables that have been identified in the research purpose and aims to give the reader an overview of what is known about those variables, how and by whom those variables have been studied in the past.

• Literature reviews should reflect current publications to ensure that they describe the state of the science, and as such, primary sources should be used in a literature review.

• Sources used in literature reviews should generally have been published in refereed or peer-reviewed journals to ensure the quality of the published report.
Where should we look for Reports of Research?

There are three major sources for identifying reports of research:

Printed indexes

- Written lists of professional articles
- Organized and categorized by: **Topic & Author**
- Used before there were electronic databases; research before 1982 is categorized
- May be a good source of key words for researchers
- Key words are terms that describe the topic in which you are interested
Where should we look for Reports of Research?

The Internet:

• The network that connects computers throughout the world
• Accessed using ‘search engines’ programs used to search the Internet
Where should we look for Reports of Research?

Electronic databases:

- Computer databases that provide categorized bibliographic citations of scholarly work
- Categorized by author, topic, keywords, title, journal
- Available in most academic libraries either on CD-ROM or online

Examples include:

- PUBMED / CINAHL / EBSCOhost / ACADEMIC SEARCH PREMIER

- **Key words** are used to search electronic databases. They are descriptive terms regarding a research question
But is it research?

Which sample title would you say reflects research?

1. “Five steps to improving your eye-hand coordination”
2. “The role of technology in maintaining the wealth of businesses”
3. “Comparison of two approaches to diabetes education in adolescents”
4. “Internet searching—what is the most useful advice?”
But is it research?

Any of these titles MAY actually reflect a research report, and probably each article is based on research findings and may even describe some research, but...MOST likely, only the third title is actually a report of research.
Primary research involves doing original field research, both qualitative (e.g. focus groups and interviews) or quantitative (e.g. surveys)

Advantages of Primary research: Can provide current, relevant, and specific information about the product.

Disadvantages of Primary research: Primary research can be expensive and time-consuming to collect the information, and requires a large sample to be reliable.
Secondary research involves collecting and summarizing existing information from various sources.

Advantages of Secondary research: Secondary research is relatively cheap and easily accessible.

Disadvantages of Secondary research: Secondary research can be limited by its lack of specificity, bias, and invalidated data.
The Basics of Internet Research

The Internet is a terrific resource, containing hundreds of web sites dedicated to thousands of topics. But with so many sites, it is easy to get lost. Knowing the types of search tools available, and mastering some general search tips can make your search much easier. Use caution when searching the web, however. Anybody with access to the Internet can post web sites about topics that interest them. These sites are not always accurate; therefore, it is a good idea to learn how to evaluate web sites.
Critical evaluation of the information you find is essential to conducting quality research. With so much information available, in different formats, from so many different sources, each piece of information that you select must be carefully reviewed to ensure the quality, authority, perspective, and balance that best support your research.
Evaluating Information Sources

Here are some general criteria to consider as you sort through your sources:

1. **Authority** – Who is the author? Is he/she the original author? Is the person qualified? What are his/her credentials? What is his/her occupation? Is the source sponsored by an organization?

2. **Accuracy** – Is the information accurate? How does it compare with other sources on the subject? Is the information complete? Does it provide evidence to support its claims?

3. **Objectivity** – Does the source present a balanced view on the topic? Does the author have an obvious bias? Is the source trying to convince you of a certain point of view?

4. **Level of Information** – Who is the intended audience? Is it written at a level that makes sense? Does it build on what you already know? Does it include links to additional sources?

5. **Date of Publication** – How important is the currency to your topic? Is it retrospective, providing analysis? Does it report facts from the time of issue? Is it new research replacing older studies?

6. **Scope, Depth, and Breadth** – Is the source comprehensive for the field of study? Does it present multiple viewpoints and issues?
Evaluating Information Sources

Some preliminary review or filtering is often integral to the production and publication process of individual sources. However, different publishers or creators exercise different levels of "quality control" over the information they publish.

These varying levels of review make your own assessment critically important. Some of the information for determining a source's quality and authority may be apparent in the source itself; however, some of it may require you to look at other sources.
Carefully select your search terms:

Broad or general terms will return thousands of possible sites. Try to use terms that are more specific to your topic. To narrow your terms, look at sites that you already have found and that are relevant to your topic. Identify possible search terms from those sites. You also can combine terms, using Boolean Operators.
Boolean Operators are words that allow you to combine search terms in most search engines. Following are some examples.

<table>
<thead>
<tr>
<th>Boolean Operator</th>
<th>Examples</th>
<th>Retrieves</th>
</tr>
</thead>
</table>
| **AND**          | children and television  
|                  | rodsers AND hammerstein  
|                  | children AND poverty     | Retrieves records containing both terms |
| **OR**           | television or television viewing  
|                  | sixties OR 60s OR 1960s  
|                  | labor OR labour           | Retrieves records containing either one or both terms |
| **NOT**          | television not movies  
|                  | caribbean NOT cuba       | Excludes records containing the second term |
|                  | s1 NOT s2               |
Boolean Operators

**AND:** tells the search engine to find both terms on the same site. For instance, entering "business AND ethics" would instruct the search engine to find pages that contain both words, "business" and "ethics."

**OR:** instructs the search engine to find one term or the other. Entering "business OR ethics" would cause the search engine to look for web pages that contain either the word "business" or the word "ethics," but not necessarily both words. If you use the term "OR" by itself, the search engine could return thousands of sites, but it is most useful when the same term may appear in two different ways. For instance, you could use "national football league"* OR "NFL" to find web pages about the national football league.

**NOT:** tells the search engine to find pages that contain the first word but not the second. This is helpful when you know your search term is likely to appear with another term that does not interest you.

**PLUS AND MINUS SIGNS:** Placing a plus sign (+) before a keyword is a strategy used to indicate that this word must be included in the search. Preceding a keyword with a minus sign (-) indicates that the word should not be included in the search.

**ADVANCED SEARCH FEATURES:** Allows you to limit searches by date, language, file format, type, etc.

**IMPORTANT:** If you want your search engine to search for an exact phrase, put quotation marks around the phrase.
Common Search Engines (Tools):

- AltaVista
- ClusterMed
- Excite
- Google
- HotBot
- Lycos
- Medical World Search
- Open Directory Project
- http://www.library.ubc.ca/home/isearch.html
- http://searchechinez.com/tutorial.html
- http://www.library.ubc.ca/home/isearch.htm
- http://www.searchenginez.com/tutorial.html
Using Meta Search Engines

Meta search engines search other search engines. Often they also search smaller, less well known search engines and specialized sites. Like search engines, Meta search engines frequently include indexes and other search tools.

Here are several helpful Meta Search Engines:

- RedeSearch
- BigHub
- C4
- InfoZoid
- Brightgate
- Ask Jeeves
- Dogpile
- MetaCrawler
- All4One
Organizing your search information

Reference management software, citation management software or personal bibliographic management software is software for scholars and authors to use for recording and utilizing bibliographic citations (references). Once a citation has been recorded, it can be used time and again in generating bibliographies, such as lists of references in scholarly books, articles and essays.

Organizing your search information

Popular examples of reference management systems include:

RefWorks: http://www.refworks.com/
Zotero: http://www.zotero.org/
Reference Manager: http://www.refman.com
Literature Search Assignment

1. Prepare a Literature Search Strategy for your proposed research project. The strategy should identify the plan for primary and secondary research.

2. List and briefly describe the value of 3 websites related to your applied research project.

3. List and briefly describe 3 - 5 academic journal articles (primary sources) related to your applied research project.

Evaluate one of the sources you find following the criteria below:

- **Authority** – Who is the author? Is he/she the original author? Is the person qualified? What are his/her credentials? What is his/her occupation? Is the source sponsored by an organization?

- **Accuracy** – Is the information accurate? How does it compare with other sources on the subject? Is the information complete? Does it provide evidence to support its claims?

- **Objectivity** – Does the source present a balanced view on the topic? Does the author have an obvious bias? Is the source trying to convince you of a certain point of view?

- **Level of Information** – Who is the intended audience? Is it written at a level that makes sense? Does it build on what you already know? Does it include links to additional sources? **Date of Publication** – How important is the currency to your topic? Is it retrospective, providing analysis? Does it report facts from the time of issue? Is it new research replacing older studies?

- **Scope, Depth, and Breadth** – Is the source comprehensive for the field of study? Does it present multiple viewpoints and issues?