10-1-2001

A Library Research Strategy for Communication

Scott Mandernack
Marquette University, scott.mandernack@marquette.edu

Published version. "A Library Research Strategy for Communication," in *Principles of Human Communication, 5th Edition*. Ed. Robert E. Smith. Dubuque: Kendall Hunt Publishing Company, 2001: 439-456. Permalink.
Scott Mandernack was affiliated with Purdue University at the time of publication.

A Library Research Strategy for Communication

Communication is a broad discipline, including research from the fields of psychology, sociology, anthropology, linguistics, medicine, technology and many others. Because of its interdisciplinary nature, library research in this field takes on added dimensions. As with any research, one must know how to identify and locate information sources, evaluate the information, and then synthesize it into a well-organized presentation. Knowing some basic concepts, procedures, and resources will provide you with a good foundation on which to begin your research.

One single, universal process of conducting research cannot be prescribed for every topic or every individual. Research is dynamic and personal, with many factors contributing to each person's approach. However, understanding a basic **research strategy** - a process of identifying, locating, evaluating, and communicating information in an organized, logical fashion - will ensure that you have considered all of your options and efficiently found appropriate materials without neglecting important resources.

Getting Started

Having a good understanding of what you actually want to accomplish will determine the direction and ultimately the success of your research. Be sure you understand the requirements of your project and the timeframe you have to work in, and then set realistic expectations.

- How long does your presentation have to be?
  The length of your paper or speech will determine to a large extent how much information you will need.
- What will be the depth and scope of your research?
  Greater depth on a topic may require more resources and a greater diversity of materials.
- Who is your audience?
  The assumptions you make about your audience may affect the level of materials you use, the amount of information, and the perspective you take.
- How much time do you have to complete your research?
  Set your deadlines carefully. Consider the date that your project is due, and the amount of time that you have to work on it, and then create a manageable timetable for completing each step of your research. A general recommendation is to allow:

    - 5% of the total project time for planning your project
    - 5% for preliminary project selection
    - 15% for topic formulation and focus
    - 30% for gathering information
    - 5% for preparing to write
    - 40% for writing and revising

  Remember that you may need to revise your timetable as you more fully explore your topic and proceed with subsequent steps.

Be aware of the additional resources that are available to provide assistance. If you're a beginning researcher, get to know the library staff. They can be a valuable resource at any step of your research process. Also, get familiar with other campus resources, such as the campus computer labs, writing labs (perhaps also on online writing lab), learning resource centers, copy centers, etc.

Selecting and Refining a Topic

Finding the right topic for your research can sometimes be the most challenging part of the whole process. There are a few important, preliminary considerations to make before even beginning to look for your information:

- Consider your interest in the topic.
- Assess what you already know about the subject.
- Determine the perspective from which you will approach the topic.
- Articulate your specific interests and develop a focus.
- Determine the discipline(s) that will provide appropriate information.

If you are unclear about how to answer any of these questions, or if you feel you'd like additional information about the subject area you have chosen, find some general, background information to get an overview of the field of study. Understanding basic concepts, theories, etc., and putting the topic into an appropriate context may give some direction to your treatment of the subject.

Encyclopedias, dictionaries, and handbooks can be very useful sources for finding general information. They provide basic, introductory information on a topic and offer a broad perspective, summarizing major developments in the field, identifying key researchers or other notable individuals, or leading you to important works about the subject. As you read through some introductory essays, keep in mind how the various elements of the topic relate to each other. Are there approaches to the topic that you haven't considered? What discipline(s) are most likely to write about these various perspectives? Remember, when using general information sources, you may need to look under broader subjects than the particular topic you have chosen. Your specific topic may be discussed within the context of a related subject. Use the indexes in these sources whenever possible.

While learning about a new subject area, you may come across unfamiliar words or terms, or familiar words used in an unfamiliar context. Dictionaries and encyclopedias -- which may be either general or specialized for a specific field or discipline -- may offer some clarification. It will be important that you understand how the terms relate to one another. Is one term synonymous with another? Do they convey slightly different meanings? Is one term more specific? Understanding how the concepts within the subject area -- and therefore, the terms that are used -- relate to one another is directly related to how you will go about searching for your information. With the increasing availability of networked databases and systems, with their enhanced search capabilities, your mastery of these electronic sources will depend largely on how well you understand your topic and enter the relevant terms.

Usually located in the Reference section of the library, general information sources are arranged so you can find quickly the information you need. A few examples of encyclopedias, dictionaries, and handbooks related to communication are:

- *Censorship: A World Encyclopedia*
- *Data & Telecommunications Dictionary*
- *Encyclopedia of Psychology*
- *Encyclopedia of Television*
- *Handbook of Organizational Behavior*
- *International Encyclopedia of Communications*
- *International Encyclopedia of Educational Technology*
- *Language and Communication: A Cross-Cultural Encyclopedia*
- *Oxford English Dictionary*

Other general survey sources may be identified by using the library catalog. By looking under the subject heading for the broad discipline that matches your topic, and then looking further for the standard subheading "-- Dictionaries," you may locate specialized dictionaries as well as encyclopedias and handbooks in that particular field. For example, searching under the subject heading "communication--dictionaries" in a library catalog will help you find encyclopedias, handbooks and dictionaries in the broad field of communication.

In online catalogs, additional search techniques may be used to identify general sources. Many computerized catalogs allow searching on key words in the bibliographic record. Conducting a keyword search will often result in more entries because the terms may appear in any part of the record rather than as subject headings only. For example, the keyword search "psychology AND dictionaries" will identify any record in the database in which these two words appear. You will find many of the encyclopedias and handbooks in the broad field of psychology with this type of search, but you may also find sources on specific branches of psychology, such as social psychology, experimental psychology, or pathological psychology.

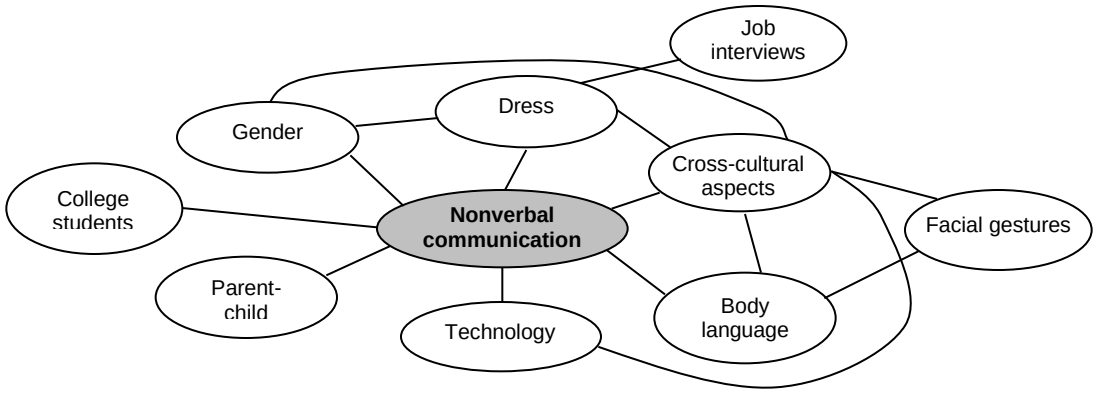
Once you have a basic understanding of the subject area, you can determine the scope of your topic and consider focusing on particular aspects. The information you found from the general sources will help you to determine what approach is of most interest to you. It is important to understand the many avenues of inquiry that are possible and to make conscious decisions about which one(s) you will choose. Whenever possible, try to relate your topic to your own interests or experiences. Personalizing the topic will make the research more meaningful and relevant. You may wish to consider limiting your topic by such factors as:

- geographic region (i.e. country, state, city)
- time period (i.e. prehistory, 18th century, 1991, 2020)
- population group (i.e. students, accountants, women, minorities)
- other considerations (i.e. cross-disciplinary perspectives, etc.)

One method of articulating your topic ideas is to develop a concept map. Concept mapping is a method that can be used to describe, in graphic form, the relationships between issues and aspects of a topic area. Begin by placing the main idea in a central

circle. As issues and aspects are identified, relate them to the main idea with a connecting line. You may generate several levels of relationships, as appropriate, to depict sub-aspects and issues.

For example:



The resulting diagram will illustrate the diversity of perspectives regarding your topic and help you consider possible approaches you may take. Refining your topic into a well formulated research question will provide you with a theme or direction for your research. A well-defined focus will help to unify disparate elements, eliminate nonproductive efforts, and save you a great deal of time.

Searching for In-Depth Information

Once you have formulated your research question, you are ready to begin looking for in-depth information, which is more comprehensive and will provide additional detail. Depending on the nature of your topic, you will need to determine the time frame of materials which will be relevant to your research.

Retrospective information is that which is written after an event or idea occurs. Because a period of time has elapsed between the event and publication, this information often includes historical analysis or evaluation of the topic. This type of information is typically found in books or pamphlets. Many encyclopedia articles will include bibliographies of key works on the subject, which may provide you with some good sources to start with. To locate additional books, however, you must use the library's catalog.

Library catalogs provide access to the collections of a particular library or libraries. Items may be searched by author, title, subject, and often, by additional options, such as key words in the record or call numbers. Specific search methods (i.e. search commands in computerized catalogs, etc.) may vary from one catalog to another. However, understanding some general fundamentals will provide you with a good foundation in using any library catalog.

Most library catalogs utilize a controlled vocabulary for organizing records by subject. A controlled vocabulary is a pre-determined list of terms used when assigning subject headings to each item in the catalog. In many college and university libraries, the Library of Congress subject headings are used. The listing of Library of Congress subject

headings (LCSH) provides you with the exact format of the subject headings that will be used in the catalog. In addition, it may also indicate narrower, broader, or related terms.

Using the Library of Congress Subject Headings:

a) Identify term(s) relevant to your selected topic.
b) Look up your term(s) in LCSH.
c) Terms in bold-faced print are acceptable subject headings to use in the catalog. If the library has materials on this topic, they will be listed under this heading.
d) If LCSH indicates that you should USE another term, turn to that heading.
e) Having located an accepted subject heading, LCSH may provide related terms. These related terms will be preceded by **UF**, **BT**, **RT**, or **NT**.

UF denotes a subject heading not used in the catalog.

BT refers to "broader terms." You may wish to look under this heading, particularly if you looked in the catalog under the bold-faced heading and no items were listed.

RT refers to "related terms." LCSH is telling you that this term is related to your topic and you may wish to also look under this accepted heading.

NT refers to "narrower terms." You may wish to use this heading, particularly if you looked in the catalog under the bold-faced heading and a many items were listed.

Sample entry from LCSH:

Apprehension	**Perception**
USE Perception	**UF** Apprehension
	BT Intellect Thought and thinking
	RT Intuition (Psychology)
	NT Intersensory effects Subliminal perception

Online catalogs provide additional methods to search for information about a topic other than the subject heading approach. The ability to search free-text (which is to say, by any key word in the bibliographic record) offers tremendous capabilities and flexibility. A major concept to understand in online searching is that of Boolean logic, which is a method of combining terms in specified ways within each record. Boolean logic utilizes operators which instruct the system how to process the resulting combination. The major operators recognized by most online systems are:

AND -- narrows a search; requires that each term be present in the same record, regardless of their order. Use to find records with several distinct concepts.
For example: *perception AND children*

OR -- broadens a search; requires that either term, or both, be present in the same

record. Use to group similar or related concepts.
For example: *perception OR intuition*

NOT -- narrows a search; requires that the first term be present, but not the second. Use to exclude records with the specified concept.
For example: *perception NOT subliminal*

Since the search terms may appear anywhere in the bibliographic record (as an author, a word in the title, a word in a subject heading, etc.) and in any context, these searches must be constructed carefully. A clear understanding of the topic and the terminology is critical to effectively utilize the capabilities of these operations.

After locating appropriate records in the catalog, be sure to copy all relevant information about each item. All bibliographic information is included -- author, title, publisher, date and place of publication -- and specific location information, to help you locate the item on the shelf. Many catalog records also provide additional information, such as a physical description of the item (number of pages, inclusion of illustrations and bibliographies, etc.) and notes, outlining the contents of the work.

A typical bibliographic citation for a book appears below:

> Jandt, Fred Edmund. (1998). Intercultural communication : an introduction. Thousand Oaks, Calif.: Sage Publications.

You can use information in a catalog record to evaluate an item's potential usefulness to your research even before you find it on the shelf. The *publication date* is an important indicator of the appropriateness of information about issues which may have radically changed in recent years. The *publisher* may provide an indication of the authority or perspective of the work: scholarly or university presses tend to treat a topic very differently than a popular publisher. The presence of *bibliographies* and *indexes* can be a useful evaluation tool: bibliographies will help in locating additional information, and often, a bibliography and index indicate a more scholarly approach. The *notes* field may specify the contents of anthologies or collections of essays, stories, or other works. Careful review of catalog records can give you a great deal of information and make your research easier and more efficient.

With the materials you have gathered from your use of the catalog, you may find that you have a good overview or historical perspective on the topic, but you may be lacking in the recent research, developments, or opinions. Books, by their very nature, cannot report on the most current developments. They generally have a broader scope and therefore they take more time to write; additionally, the publication process itself may take considerable time. So, for reports of what may have happened last month, for example, you will need to use some other sources.

Contemporary information -- that which is representative of the time in which it was written -- is typically found in such publications as newspapers, journals, magazines, or

web sites. Collectively, the print publications may be referred to as "periodical literature" or simply "periodicals." These publications vary widely in purpose, content, authority, and reliability.

To help eliminate confusion about the appropriateness of different types of periodicals for your research, some basic criteria have been established to help you determine the purpose and/or level of scholarship of magazines and journals. The nature of your topic will determine, to some extent, the most suitable type of publication.

Type of Publication / *Criteria*	**Scholarly Journals**	**Substantial News / General Interest**	**Popular**	**Sensational**
Format	Generally have grave, serious formats.	Attractive in appearance.	Generally slick and glossy with an attractive format.	Often produced in a cheap, newspaper format.
Graphics	Contain graphs and charts, but seldom glossy pages or pictures.	Include photographs, illustrations and graphics to enhance the publication.	Contain photographs, illustrations, and drawings to enhance their image.	Contain melodramatic photographs.
Sources	Cite sources with foot-notes and bibliographies.	Occasionally cite sources, but this is the exception .	Rarely cite sources, which may be obscure.	Rarely cite sources of information.
Authors	Written by and for scholars or researchers in the specialty.	Written for an educated, general audience by the magazine's staff, a scholar, or free-lance writers.	Written by the publica-tion's staff or free-lance writers for a broad based audience.	Contain articles written by free-lance writers or the publication's staff for an impressionable readership.
Language	Use terminology, jargon and language of the discipline. Reader is assumed to have a similar scholarly background.	Use language appropriate for an educated reader-ship. Do not emphasize a specialty but assume a basic level of intelligence.	Use simple language to meet a minimal education level. Articles are kept short, with little depth.	Contain language that is simple and easy to read and understand. An inflammatory, sensational style is often used.
Purpose	Inform, report or make available original research or experimentation to the rest of the scholarly world.	Provide general information to a wide, interested audience.	Designed to entertain or persuade. A hidden (or not so hidden) agenda is to sell products or services.	Arouse curiosity and interest by stretching and twisting the truth. Outrageous, startling headlines are used to pique curiosity and gain readership.
Publishers	Generally published by a professional organization.	Generally published by commercial enterprises for profit.	Published for profit.	Published for profit.
Advertising	Contain selective advertising.	Carry advertising.	Contain extensive advertising.	Advertising is as melo-dramatic as the stories.
Examples	*American Ethnologist* *Journal of Communication* *Journal of Politics*	*Forbes* *Psychology Today* *Scientific American* *Time*	*Glamour* *People Weekly* *Reader's Digest* *Sports Illustrated*	*Globe* *National Enquirer* *Star* *Sun*

Indexes and abstracts will help you to identify appropriate sources of information from periodicals. (An abstract provides a citation and a summary of the article; an index provides only the citation information, with no summaries). Each index or abstract covers a select group of periodical titles, which may be determined by the general subject(s) or disciplines covered, or by the type of material. Indexes and abstracts are available in book form, in CD-ROM, and on the internet. As with library catalogs, the actual mechanics of using different indexes may vary from one source or system to another. However, understanding the general function of indexes, and realizing that different indexes serve different purposes, will provide you with enough information to use them effectively in your research. A selected list of indexes and abstracts appears below:

- ***Business Periodicals Index (Wilson Business Abstracts,*** online***)***. Indexes several hundred international business periodicals, covering the broad areas of management and economics, including organizational behavior and communication, telecommunications industry, and more.
- ***Communication Abstracts (ComAbstracts,*** online***)***. Contains abstracts of articles published in the primary professional literature (approximately fifty journals) of the communications field.
- ***Film Literature Index***. A subject and author index to the international film and television/video literature appearing in over 300 periodicals, including both established film journals and specialized publications.
- ***New York Times Index***. Indexes and abstracts news articles, editorials, and special features published in the *New York Times*. Entries are classified under subject, geographic, organization and personal name headings, and arranged chronologically under them.
- ***NewsBank***. Provides access to selected full-text articles from over 500 U.S. and Canadian newspapers, news sources, and newswires. Contains comprehensive coverage of current issues and events, as well as biographies and reviews of films, theater, dance, music performances, and television programs.
- ***ProQuest Research Library***. A general database of magazine, journal, and newspaper articles from over 2300 publications in a wide variety of subject areas. Searches may be limited to only peer reviewed titles or only newspapers. Many articles are available in full-text, full image format.
- ***PsycInfo***. Covers the professional and academic literature in psychology and related disciplines including education, linguistics, medicine, psychiatry, sociology, and other areas. Coverage is worldwide, and includes references and abstracts to over 1300 journals and dissertations.
- ***Social Sciences Index (Social Sciences Abstracts,*** online***)***. Indexes over 400 English-language journals in the fields of anthropology, economics, geography, international relations, political science, psychology, sociology, and related subjects.

Selecting the appropriate indexes for your research will be determined largely by your approach to the topic. Some topics may require articles from scholarly journals, whereas others may rely more on popular magazines or newspapers. Other topics may be considered from various disciplinary perspectives. Still others may take you into literature written last week or last month, whereas others may require that you find materials

written ten, twenty or fifty years ago. Consider the following factors in selecting the indexes and abstracts that will be most relevant to your topic:

- **Subject relevancy** -- Only with a thorough understanding of the topic can you decide what disciplines are most appropriate for reporting on the research in the specified subject area.
- **Time period covered by source** -- Be certain that the index or abstract you select covers materials for the appropriate time period for your topic. Many of the computerized databases have been developed only in recent years and may be limited to more recent materials.
- **Level of material** -- Some indexes, such as Reader's Guide to Periodical Literature, focus largely on the popular magazines while others lead to scholarly and technical papers, conference proceedings, manuscript collections, and the like. Your knowledge of the topic will determine what level of materials is most suitable.
- **Type of material** -- The nature of your topic will be key to determining the type of material you use in your research. For some topics, magazine and newspaper accounts may suffice; others may require more in-depth analysis, leading to more scholarly research in the field. Some topics may be more appropriately covered in books, which provide a broader, more comprehensive overview of the subject area.
- **Breadth of coverage** -- Each index and abstract determines its own collection of materials to be included. Some features to look for include: comprehensiveness of indexing (i.e., does it index every article in each of the magazines, journals, or newspapers it includes, or is it selective?); inclusion of international materials; inclusion of materials written in other languages.

Indexes and abstracts will provide references to articles on your selected topic. Those in the print format are usually arranged alphabetically by subject, though some also list authors and titles. The electronic databases often provide many of the same search features and functions as the online catalogs, providing access to articles by author, title, subject headings, the name of the magazine or journal, date, or any keyword in the record. Oftentimes, the electronic sources provide abstracts, which may also be searchable.

Each entry in an index or abstract is referred to as a "citation." The elements of a citation include: the author(s) of the article; the title of the article; the name of the periodical; the volume number, and sometimes the specific issue number; the pages on which the article appears; and the date of the issue. Be sure to copy all relevant information from the index so that you have complete information when you compile your list of references. The following example illustrates a typical bibliographic citation for a journal article:

> Peiser, Wolfram, and Peter, Jochen. (2000). "Third-person perception of television-viewing behavior." Journal of Communication 50 (1): 25-45.

A number of different styles for citing articles are employed throughout the literature. These various styles have been established to best serve the needs of researchers and of scholarly publication in particular fields of study The standard styles used include the MLA (Modern Language Association) style and the APA (American Psychological Association) style, among others. Be sure to use the style appropriate for your research. Manuals explaining each style are available.

Web sites, which may be identified by using either a web directory or a web search engine, are another valuable source of information. A directory lists web sites that are pre-selected by individuals and arranged into categories or topical areas. There are many directories available on the web, some developed by libraries, some by organizations, others by internet service providers, or by commercial entities. The scope and size of directories vary widely, so choosing the right directory for your topic requires careful consideration. Some directories that have been well-rated include Open Directory Project (http://www.dmoz.org) or Yahoo! (http://www.yahoo.com).

Web search engines function in much the same manner as electronic indexes or library catalogs. However, since web sites are not organized into standardized fields (i.e., author, title, subject headings, publisher) as records in indexes or catalogs are, web search engines often use programs (called robots or crawlers) to crawl about the web indexing sites, usually looking at URLs, the headings of documents, or text in the documents. The results are generally sorted in some fashion, either by a relevancy algorithm, by date, or alphabetically.

Since there are millions of registered web sites, no single search engine or directory will be complete. Each has its own methods of selecting and indexing sites, so choose carefully. Some web sites that rate many of the available search engines include: *Search Engine Watch* (http://searchenginewatch.com), developed by Danny Sullivan; and *Search Engine Showdown* (http://www.notess.com/search/), developed by Greg Notess. A good rule of thumb is to try your search in several different directories or search engines, and then select the sites that are most appropriate.

Evaluating Information

Critical evaluation of the information that you find is an essential component of the research process. The fact that something appears in print or is on the web does not make it true or "correct." It is your responsibility as a researcher to think critically about the information and determine its quality, authority, perspective, and balance so you select the information that best supports your research.

Evaluation of your sources should consider the information itself as it is presented, but also, the publication in which it appears, which may lend evidence as to its quality and perspective. Particular consideration must be given to evaluating web sites. Since the nature of the web is to be a very open, unfiltered environment, there is little control over much of what is posted. Virtually anyone can create a web site on any topic, whether they have training, education, or experience in the subject field or not.

Whether you are reviewing a book, a journal article, a newspaper article, or a web site, keep in mind these general criteria in determining which sources are most appropriate for you:

Date of Publication or Creation -- How important is currency to your topic? Is the very latest information critical, or is the nature of your topic stable enough to use older sources? The subject discipline you're working in may, to some extent, determine the importance of the currency of the information. For example, technological developments may change very quickly, requiring very current information, but information about historical issues which may have been written many years ago may still be relevant and useful.

Reliability/ Credibility -- Are the facts accurate? Do they support the thesis? Can you rely on this information? These are some of the questions researchers must ask to determine reliability of information. While experts in a subject area may easily judge a work's reliability, it is usually more difficult for the novice researcher. One way to determine reliability is to compare the work with other writings on the topic. If a source includes a bibliography or references to other works, or links to other web sites, follow up on some of these and compare what is presented among all the sources. If you detect conflicting information, you should question why there is a discrepancy. It may be that the source in disagreement is in fact the "correct" one, or it may be presenting new information, or offering a different perspective.

If you aren't sure about the reliability of some information, check some outside sources as well. Book reviews can be a source of information to determine reliability. Often written by other experts in the field, they may provide insight on the information presented and they often relate it to other works on the topic. Book review indexes, such as Book Review Digest and Book Review Index, may help to identify reviews of many published books. Some web search engines or directories have developed rating systems for web sites, which you may use as a guide to determine reliability as well. However, these ratings may consider site design or general appeal as much as the content, so take this into consideration.

Credibility refers to the authority and/or qualifications of the writer who makes the claims or presents the information in the work. Does the author have the appropriate training, education, or expertise? Are the "authorities" cited by the author qualified to make the claims they are making? Ascertaining the credentials of the author or experts named will help to determine the credibility of the work.

Some sources provide brief biographical information about the authors or creators of the publication or site. While this may give you some indication of the author's credentials, it's not always sufficient. A number of reference works can help identify additional biographical information for authors and other individuals: Biography and Genealogy Master Index serves as an index to hundreds of sources which provide biographical information on people from all nationalities, occupations, and time periods; Current Biography compiles short articles on individuals of current interest or popularity, from all occupations and of various nationalities; Contemporary Authors includes brief entries on

writers in fiction, nonfiction, poetry, journalism, television, and other fields; and, Biography Index is a guide to biographical material appearing in selected periodicals and books.

Perspective -- How an author's cultural or experiential background affects the approach he or she has taken may profoundly affect the viewpoints that are expressed or the conclusions reached. It may also determine what information has been included or excluded. Some of the background information found when looking into an author's credibility may help in determining one's perspective, as well. Consider the following:

- Affiliation of the author(s) -- the person's political, professional, social, or economic affiliations may determine the views expressed.
- Place of publication -- where a publication originates from may serve as a clue to its perspective. For example, information presented in one country may vary greatly from the information presented in another.
- Date of publication -- perspectives often change over time; you must try to understand why people write what they do in the context of the times in which they live.

Another indication of perspective for web sites may be the *domain*, which is represented by the last 3-digit segment of the "root" URL Web sites are generated within one of several domains:

- **.edu** indicates the page is generated at or by an educational institution
- **.com** indicates it is generated by a commercial entity
- **.org** means it is sponsored or created by an organization
- **.gov** denotes a government agency

There are additional domains, but these are the most common. Much of the information on the web is business-related or commercial: companies may be marketing or otherwise trying to convince consumers of the value of their products or services. Similarly, much of the information on the web is personal: personal web pages, e-mail messages, newsgroup postings, and the like may be retrieved in your search results. These sources are not necessarily invalid for your research, however great caution must be used when basing your own analysis on the evidence they present.

Level of Information -- Who is the intended audience for the source or site you are using: the general public? the educated layperson? professionals? practitioners? scholars? Is it written at a level that makes sense to you and to your knowledge and understanding of the topic? Consider the vocabulary used. Does the source include a bibliography or links to related sites, providing additional sources to consult?

Scope of Coverage / Depth / Breadth -- Is the source comprehensive for the field of study, presenting multiple viewpoints and issues? Is it specialized, focusing on only certain aspects of the topic? Is it narrowly defined, offering limited views or perspectives? Is it ethnocentric? Does it provide enough evidence to support its claims or position?

Quality of Publication -- Do you know anything about the publisher of the source? Is it published, sponsored, or endorsed by a professional association, organization, or society? Is the information accurate? How does it compare with other information on the topic?

Ease of Use -- Does the source contain a table of contents and/or an index to facilitate use and find the specific information you need? Does it include a bibliography?

Special Features -- Does the source contain graphs, tables, charts, maps, or other special features that add to its usefulness?

After evaluating each of your sources, you may find that you wish to eliminate some of them as inappropriate and find references to other materials that will better support your research . In some cases, you may find that there is not enough evidence available to support the specific view which you had proposed. You may need to go back and identify additional sources or perhaps even refine or modify your topic once again. Wherever it leads you, the objective of your research is to develop a well-formulated analysis of your topic, which can be adequately supported, and to present it in an organized fashion.

Conclusion

The basic research strategy presented here is intended to provide a framework for finding information in any subject area, for any information need. Whether you are writing a comprehensive research paper, conducting a five minute speech, or simply wanting to know about a favorite personality, applying this model will guide you through the steps of gathering the necessary information. At whatever stage of the process, or whatever source you are looking at, making informed decisions to evaluate the usefulness and appropriateness of any information is critical.

As a researcher, you must recognize that information itself does not constitute knowledge. Knowledge refers to an understanding or awareness gained through study or research. In order to effectively engage in that research, you must become "information literate," understanding how to effectively identify, locate, evaluate and communicate information.