

Doing Your Research

In today's world, people are overcome with information anxiety, especially when confronting a research paper! Here are some interesting tidbits about our Information Age:

- More new information has been generated in the past 30 years than in the previous 5,000 years.
- There are 3 billion pages on the World Wide Web, and the number is increasing by 5 million pages daily.
- Electronic information doubles every hour.

Would you believe that *The New York Times* contains more information in one weekday issue than the average person knew in his lifetime in seventeenth-century England?

So, with all of this information available, how and where do you begin? To become **information literate** in today's world, you must develop an ability to **know when you need information**; and then **how to identify, locate, and effectively use information** for the issue or problem at hand.



Library

The best place to begin research is your college library. It has the resources, services, and staff that can make your research easier and more efficient, thus saving you time and providing better results. The key advantage to using the library (as opposed to relying solely on the Internet) is that you will be accessing *quality* resources rather than just a large *quantity*. Each library at Tidewater Community College offers print and electronic resources, along with audiovisual materials (such as DVDs and tapes), on a wide range of subjects. Library hours vary and are posted on the front doors and on the LRC Web pages.

Remember to bring your **TCC Student ID card** to the library, as this also serves as your library card. **Consortium cards**, which permit currently enrolled TCC students to have library privileges at area colleges and universities, are available at the circulation desk. Books and media not available at one campus may be requested from another campus by filling out an **Intercampus Loan** form. If you need research materials not available at TCC, you may request items from other libraries by filling out an **Interlibrary Loan** form. Both of these forms are available at the library or online from the LRC Web pages.

Databases

Many library resources are found in databases. What is a database? A **database** is an organized collection of information. A **record** represents one particular item in a database. For example, in a library catalog (a database), there is a record for each book in the library's collection. In a periodicals database, there is a record for each article listed. **Fields** are the individual pieces of a record in a database. A book record in the library catalog normally includes a title field, an author field, and a date-of-publication field. An article record in a periodicals database contains separate fields for author, article title, periodical title, and issue date.

Each record in a database is composed of searchable fields.



There are several varieties of databases:

- **Bibliographic database:** Describes items in the library such as books and videos and where to find them, but does not contain the items themselves
- **Full text database:** Contains the entire article from an encyclopedia or a periodical
- **Mixed database:** Contains bibliographic information and includes some full text articles

Databases also vary in the range of items they include. When selecting a database, consider the following:

- **Subject Area:** Health, science, history
- **Publication Type:** Newspapers, journals, TV excerpts
- **Geographic Area:** United States, international
- **Language:** English, German, Chinese
- **Time Period:** 1985-2000, 1996-



Ask a librarian for assistance in determining which periodical databases will be most useful to you with your topic.

Subject vs. Keyword Searching

When searching a database, you have several options. Most of us are familiar with **keyword** searching, which allows you to search for any word that comes to mind anywhere in a record. Most Internet searching uses the keyword method. Keyword searching is useful for

- beginning a search
- identifying subject headings for a topic
- finding every time the word is used.

Another way to search databases is by **subject**, which uses controlled vocabulary to provide a more focused search. A list of all of the subject headings used in a particular database or catalog is called a *thesaurus*. Subject searching is useful for

- finding records specifically about your topic
- searching the subject field only.

Selecting a Topic

Every good research paper starts off with a well-defined topic. How do you begin? Here are some general rules:

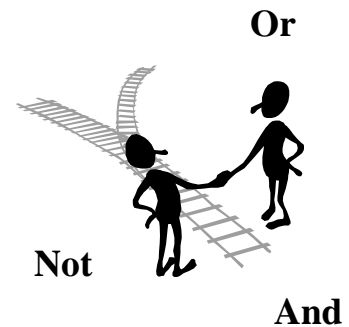


- choose a subject that interests you
- determine whether you need to broaden or narrow your subject
- do preliminary checking to see that information is readily available
- make sure your professor approves your subject

Search Strategy

After selecting your topic, formulate a search strategy by

- identifying the main concepts
- listing significant keywords/synonyms or phrases for your subject
- phrasing your topic in the form of a question, which forms your thesis
- combining terms using **Boolean operators** such as *and*, *or*, and *not*.

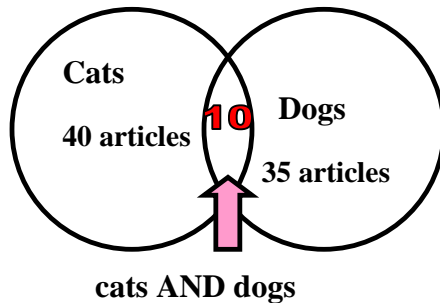


BOOLEAN SEARCHING:

Using AND, OR, and NOT to Improve Your Search Results

AND

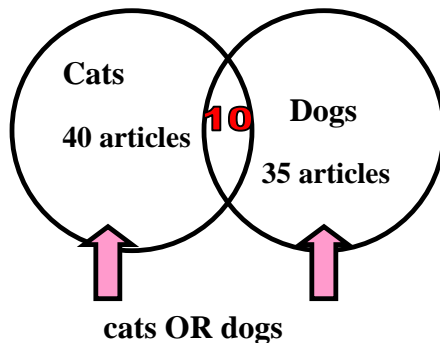
- Combines terms
- Narrows the search
- Results include fewer citations



The search results include 10 citations.
(There are 10 articles containing both search terms.)

OR

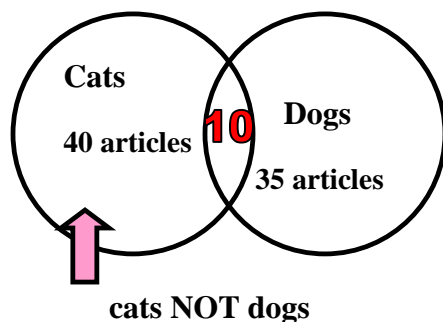
- Broadens the search
- Results include more citations than did either search term alone



The search results include 65 citations.
(There are 65 unique articles using one term or the other.)

NOT

- Narrows the search
- Results include fewer citations than did the first search term alone
- Can be dangerous to use. It excludes potentially useful articles that mention both search terms



The search results include 30 citations.
(There are 30 articles about cats that do not contain the word *dogs*.)

Here are more ways to enhance your search strategy:

- **Take advantage of any “Advanced Search” options and “Help” links** that are available within the catalog, database, or search engine you are using. Advanced options are an excellent choice for beginners, as well as experienced searchers, because they help you to arrange your keywords into the correct format for finding just what you need.
- **Truncation:** When truncation is an option, you may shorten a search term by using a question mark (?) or some other symbol, depending on which database you are using. This allows retrieval of all terms beginning with the letters you typed before the symbol.



In the **TCC library catalog**, the symbol for truncation is a question mark (?). Thus, if you do a keyword search for *farm?* you will retrieve lists of books where the words *farm, farms, farmer, farmers, farmhouse*, etc. appear somewhere in the record for that book.

- **Wildcard searching:** “Wildcards” permit you to substitute a symbol for one or more letters within a word.

In some databases you can type *wom?n* to search for occurrences of either *women* or *woman*.



Library Resources

You can find information everywhere – books, encyclopedias, newspapers, magazines, videos, documentaries, the Web, etc. Any of these may be what you need, depending on the stage of your research. How do you choose the best one? Which source has the sort of information you are trying to find? Oftentimes, choosing a variety of sources will provide different types of information and points of view on your subject.

Type of Source	When to Use
Books (Nonfiction)	When you need background information, an overview of a topic, or detailed discussion of a topic that is not a recent occurrence or discovery
Newspaper Articles	When you need information about current events OR When you want to examine how newspapers covered topics at a particular point in time
Magazine Articles	When you need information on current topics OR When you want to trace how topics were covered in the popular press at certain points in time
Journal Articles	When you need scholarly views on a topic <i>Note:</i> Most journal articles focus on specific aspects of topics. They are written on a level to be understood by people who already have background knowledge about a field of study.
Internet	When you need something that is: Very current, such as today's news or a press release from government, business, or other organization Brief and not detailed Published by a government or an association On an obscure or current subject about which it is unlikely there has been much information published



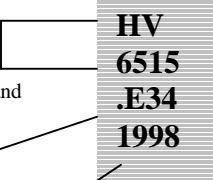

Choosing a variety of sources will provide different types of information and points of view on your subject.

Primary vs. Secondary Sources

Your instructor may require that you consult one or more *primary sources*. A primary source is information in its original form, such as a diary, a report of a scientific experiment, original research, music, art, or photographs. Any work that *interprets* a primary source is referred to as a *secondary source*. Common examples of secondary sources include literary criticism, most books, and journal articles. If a source does not fit the definition of a primary source, it is probably a secondary source.

Library Catalog

How do you find materials located in the library? You use the library's catalog where you can search by author, title, subject, and keyword. All items in the library are given a call number, which is the address for the book. It is based on the Library of Congress classification system and uses a combination of letters and numbers to represent subject areas.

Title: The Killers Among Us.	The first two lines describe the subject of the book.	
Author: Egger, Steven A.	HV6515 = Criminology, Crimes and Offenses	
Call Number: HV 6515 .E34 1998	This line often represents the author's last name.	
	The year the book was published.	

Most library books are in the **circulating collection**, which means they may be checked out. On the other hand, books in the **reference collection** must be used in the library. Reference materials, which include encyclopedias, dictionaries, almanacs, handbooks, manuals, etc., are most useful when you need background or very specific bits of information, and they are not intended to be read cover-to-cover.

When you need to access reference materials at home, there are a number of **online reference sources** available to TCC students. These resources include *AccessScience* (a science encyclopedia), *Animal Diversity Web*, *Grove Dictionary of Art*, *Flags of the World*, *Literature Resource Center*, *Core Documents of U.S. Democracy*, *Occupational Outlook Handbook*, *Roget's Thesaurus*, and *World Almanacs*, to name only a few. On the LRC home page you will find a link to these resources, along with instructions for determining your **User ID and Password**, which permit off-campus access to subscription databases.

Periodicals (Newspapers, Magazines, Journals)

Periodical articles often provide concise, in-depth and current information on your topic. Your instructor may require that you refer only to scholarly or academic journals. Let's look at the differences.

CRITERIA	SCHOLARLY JOURNALS	POPULAR MAGAZINES
Format / Graphics	Serious articles Graphs & charts Mostly print	Attractive & colorful Photos & illustrations Less print
Sources	Footnotes List of works cited	Vague about origin of information
Language	Lengthy articles Written by scholars & researchers using professional language & terminology	Short articles Written by staff & freelance writers using simple language with little depth
Publishers	Published by professional organizations to report on research	Published for profit to entertain, persuade, and sell products and services
Examples	<i>Harvard Business Review</i> <i>New England Journal of Medicine</i>	<i>Sports Illustrated</i> <i>People Weekly</i>

To find articles, search the periodical databases. Usually it is best to begin your research using the full-text databases. Some full-text databases are *totally* full text, which means that you can print out any article you find listed. Others are a combination of citations, abstracts, and full text.

Take a look at the following example of a citation from a periodical database. Did you notice that there is no author listed? Usually an author's name will be provided unless the article cited was the collaborative effort of many people.

The Marriage Savers: Does couples therapy really work? The divorce rate says no, but a new breed of therapists offers hope. (Love, Sex & Health/Behavior)

Time Jan 19, 2004 v.163 i3 Special Issue p88 (4205 words)

Internet

The Internet, also known as the *information superhighway*, *cyberspace*, or *virtual world*, is the global collection of computers linked together. The Internet can transmit pictures, sounds, text, and video. Browsers, such as Internet Explorer and Netscape, are the software tools you use to access and view information on the Internet. Some of the services provided by the Internet are:

- **Email:** Can send and receive free mail with attachments
- **Listservs:** Electronic interactive newspaper
- **Newsgroups:** Group discussions on specific topics
- **FTP:** File transfer protocol—send and receive files
- **World Wide Web:** Documents on the Internet
- **Search engines:** Software that searches the Web for information and retrieves Web pages that meet the criteria in your search. (Examples include Google and Yahoo.)

Just as its call number is the “address” of a book in the library, the URL (Uniform Resource Locator) is the address for a Web page. Capitalization, punctuation, and spacing must be exact when you specify a URL. Most URLs include the name or type of the organization sponsoring the Web page, so you can make a quick judgment on the page’s validity by examining the three-letter code (domain) identifying it. Some of these codes are

- **.edu** Educational institution
- **.gov** Federal government
- **.org** Non-profit organization
- **.com** Commercial

Librarians select what the library purchases, but anyone can put pages on the World Wide Web. No one reviews or censors the Web, so it is essential that you be able to judge what is reliable information and what is not. In addition to the domain codes mentioned above, there are a number of factors you should consider when evaluating the reliability of a Web site. These include the author, publisher, currency or timeliness, bias, and content.

EVALUATING THE RELIABILITY OF A WEB SITE

- Author**
- Who wrote the page?
 - Can you find other books or articles written by the author?
 - Does the author have any credentials?
 - Is a name or an email contact provided?
- Publisher**
- Check the domain--**.gov and .edu** are usually reliable
 - Is there a ~ in the URL? This indicates it could be a personal page and not necessarily reliable.
- Currency/Timeliness**
- Usually found in the footer or header
 - When was the page originally created?
 - When was the page last updated?
- Bias**
- Is it selling, promoting, or ranting?
 - Is it balanced?
 - Look at links on the page. Do they lead you to other viewpoints?
 - Look for statement of purpose or philosophy
 - Does the page contain mainly opinions or facts?
- Content**
- Does the information pertain to your topic?
 - Is the information aimed at specialists or a general audience?
 - Is the information too elementary, too technical, or too advanced?
 - Is the information organized in a clear and logical fashion?
 - Are there other references (bibliography, footnotes, links)?



If you are away from the library and have trouble selecting or using an online resource, just go to the LRC home page and click on “Ask a Librarian.”

Issues of the Information Age

There are many legal, social, political, and ethical issues related to information.

Copyright law protects original works such as books, movies, art, and computer programs by defining the legal right to reproduce, publish, and sell. An author's work is protected as soon as the work is created. This law protects owners from loss of income. The section of the Copyright Law that allows libraries and educational institutions to use copyrighted works for teaching and research is called **fair use**.

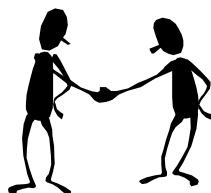
Plagiarism is the stealing of intellectual property. Plagiarism does not only involve the cutting and pasting of information. Did you know that plagiarism might occur even when you reword what someone else has written? Almost all of your research involves borrowing ideas from other people, whether these ideas come from television, books, articles, or elsewhere. Your best bet is to cite everything you use -- including books, articles, Internet sites, interviews, videos, CDs, TV documentaries -- unless the information is considered common knowledge. (For example, you would not need to cite the fact the sun rises in the east!)

By citing the sources you use in your paper, you give credit to the author and allow other people to find the sources you used. To cite sources properly, refer to style manuals. The most common style manuals are:

- *MLA Handbook for Writers of Research Papers*
- *Chicago Manual of Style*
- *Style Manual of the American Psychological Association*

Your instructor will tell you which citation format to use on your Works Cited page. In addition to printed style manuals, the TCC library also provides Writing Center handouts and Web links to online style manuals in its subject guide, "Writing Assignments and Research Papers."

Privacy and security issues, especially in these times, are of great concern. The library has adopted policies and procedures to ensure your privacy. However, you should be aware that computer programs can track which Web sites you have visited and allow others to view your email.



Remember ... your library staff is here to serve you, whether in person or on the Web!

Terms to Know

Abstract	A summary or shortened version of an article or book
Annotation	A note describing an item in a bibliography
Anthology	A collection of literary pieces by more than one author
Archive	A place in which public records or historic documents are kept
Author	Usually the person or persons responsible for the creation of a literary work, article, movie script, etc. May be a government agency, a company, or other group responsible for a book or an article.
Bibliography	A list of citations usually found at the end of a paper, article, chapter, or book
Biography	A written history or account of someone's life
Boolean operators	Connecting words used in computer searching of databases and the Internet to combine similar or different concepts. The standard Boolean operators are: AND - Narrows the search by connecting two or more words or phrases, requiring them both to occur in a record before that record is selected. OR - Broadens the search by allowing the search to match any of the words or phrases. NOT - Excludes words or phrases from the search.
Browser	A software program used to access and view web pages, such as Internet Explorer or Netscape Navigator
Call Number	The number assigned to a book so you can find it on the shelf. In college libraries it is based on the Library of Congress classification system and uses a combination of letters and numbers, such as this: HV6515.E34 1998
Catalog	In a library, this contains records for each item in the library – books, magazines, videos, DVDs, etc. The catalog can be searched by using fields such as author, title, subject, keyword, and call number.
Citation	A reference to a book, a periodical article, or another source. It contains all the information necessary to identify and locate the work, including author, title, publisher, publication name, dates, page numbers, volumes, etc.

Classification	A system of organizing or arranging materials on the shelves by subject
Copyright	Exclusive rights to publication or production of literary, musical, artistic, or electronic work as authorized by U.S. law
Database	An organized collection of information usually pertaining to a particular subject. A database is composed of records, and records are composed of fields.
Fields	Individual sections of a record in a database. Most book records in a library catalog will contain an author field and a title field.
Full text	The full article is available in electronic format.
Hyperlink	A link, such as words or graphics in a document, that leads to related text when it is selected
Icon	A small symbol on a computer screen that represents a computer operation or data file
Index	A list of names or topics usually found at the end of a publication, which directs you to the pages where the names or topics are discussed OR, A printed or electronic publication, which lists references to periodical articles or books by subject and/or author
Information Literacy	The ability to know when one has a need for information and the ability to identify, locate, and effectively use information for the issue or problem at hand
Interlibrary Loan	A service that allows one to borrow materials from other libraries through one's own library
Internet	A global connection/collection of computers linked together transmitting pictures, sounds, text, and video. The computers can speak with each other through a common set of rules (protocols). Also known as <i>information superhighway</i> , <i>cyberspace</i> , and <i>virtual world</i> .
Keyword	A significant word from the title, author's name, or text of a document which is used to search for the document online
Magazine	A periodical containing popular articles. A magazine can be useful for finding current information and usually includes pictures, short articles, and a variety of topics in one issue. Examples: <i>Newsweek</i> , <i>People</i> , <i>Time</i> .
Media	Non-print materials such as films, videocassettes, CDs, DVDs, and audiotapes that require the use of special listening or viewing devices

Metasite	Search engine that submits a specified search simultaneously to many different search engines. Examples include Vivisimo, ixquick, and KartOO.
Periodical	A work that is published regularly, such as a magazine, journal, or newspaper
Phrase searching	Combining adjacent words for a search. You often need to use quotation marks around the words when searching for a phrase.
Plagiarism	Failure to give proper credit to an author. This includes cutting and pasting information from a Web site into your paper, taking a sentence or two directly from a book into your paper, or even rewording someone else's idea.
Primary Sources	Original resources that first report research, events, or ideas. Examples include an eyewitness account of an event, a report of original research, or an individual's creative work of art.
Publisher	The company or person who prepares a work for public distribution
Record	Representation of a particular item in a database. In a library catalog, a record may represent one book or video. In a periodicals database, a record represents one article.
Reference Materials	Can include encyclopedias, glossaries, definitions, biographies of people, diagrams, timelines, statistics, and much more. Most useful when one needs background information, statistics, and definitions.
Scholarly Journal	A periodical published primarily for scholarly research or to provide information in a specialized field. Journal articles are written by experts and practitioners of that field. Usually journals have few pictures, long articles, and references. They are most useful when researching a specific, focused topic. Scholarly journals may also be referred to as <i>academic</i> , <i>peer reviewed</i> , <i>refereed</i> , or <i>professional journals</i> . Some examples include <i>American Fiction Studies</i> , <i>Journal of the American Medical Association</i> , and <i>Explicator</i> .
Search Engines	Software that searches the World Wide Web for information and retrieves Web pages that meet the criteria in your search. Success requires matching the words in the search with words in the Web document. Some examples of search engines are Google, Excite, and AltaVista.

Secondary Source	Any work that interprets a primary source. Examples include literary criticism, most books, and journal articles.
Subject Heading	A standardized word or group of words covering all materials dealing with a topic entered into a catalog or index. Many universities use Library of Congress subject headings. Subject headings are also known as <i>controlled vocabulary</i> or <i>descriptors</i> .
Thesaurus	A list of all subject headings (descriptors) used in a particular database, catalog, or index
Title	The identifying name given to a book, article, artwork, film, CD, etc.
Transcript	The written words of a speech, movie, radio show, or television show
Truncation	Searching by using the root of a word plus a certain symbol to retrieve all occurrences of the root word with a variety of endings. For example, searching for <i>child*</i> will retrieve <i>children, childhood, etc.</i>
URL	Uniform Resource Locator – the address for the web page. It identifies the computer, directory, and file where an item is located. Capitalization, punctuation, and spacing must be exact. An example: http://www.peta.org