

Information Literacy Lesson Plan: Module Two

Requires approximately 1 ½ to 2 hours

ACRL Standard 2: An information literate student accesses needed information effectively and efficiently.

Module 2 addresses using appropriate search methods and portals by

- demonstrating the balance of precision and accuracy for different search engines
- exploring meta-search engines and the deep web
- introducing how to control search results with databases
- presenting formatting techniques to manage information
- examining nontraditional ways of obtaining information
- presenting tools for properly citing all sources

Background Knowledge/Prerequisites

- For Module Facilitators: none
- For Students: Successful completion of Module One

Materials Needed:

- Students should have a topic
- Classroom with enough computers for each group
- Whiteboard and markers
- To know how much DeVry paid for library databases for the current FY—contact your librarian
- Demonstration computer with Internet hook up and projection unit
- Printouts of an article to use for the “Build a Database Activity.” The article should be about one page and have a variety of terms which could be indexed.

Student Deliverables (individual even if working in a group):

1. Pre-search Analysis. Appendix A
2. “I Never Meta-Search Engine I Didn’t Like,” Appendix C
3. Question Analysis, Appendix E
4. Vertical And Horizontal Thinking, Appendix F
5. Database Discovery Project, Appendix I
6. “Time to Refine?” Exercise, Appendix K
7. Setting Up a NoodleTools Account

Step1: Library Databases and Search Tools

[25 minutes]

Explain:

Whether students are searching Google or one of the library databases, there is an ongoing quest to find the right balance between retrieval and precision. High retrieval rates bring in hundreds, thousands, even hundreds of thousands of hits, many of which are of peripheral interest or even irrelevant. High precision results are significantly fewer and more focused, but may inadvertently exclude important results.

Searching library databases is part art and part science; it takes, skill, imagination, and occasionally some luck to find the right item. There is an optimal balance between high retrieval search results and high precision search results; high retrieval results are not always precise, and high precision results are not always plentiful.

Facilitate:

The Pre-Search Analysis Activity (**Appendix A**) will help students organize their thoughts and help them realize what they already know with regard to their topic. Some of the spaces may be left blank simply because the information is not known by the student at this time.

{The scoring for this assignment should be based on the effort apparent in the responses rather than their thoroughness or completeness, per se.}

Discuss:

- How might this information assist you in your research?
- What do you recall about library databases from Module 1?

Explain:

Searching a library database, such as EBSCOhost, is very different than Googling.

Library databases will often contain:

- Scholarly journals
- Popular magazines
- Trade publications
- Newspapers
- Some news transcripts
- Some excerpts from reference materials
- Some British, Australian, and Canadian English-language sources
- Some foreign language sources

For the most part they will not include:

- Complete Books
- Websites, blogs, tweets, etc.
- Broadcasts
- Videos, etc.

- Audio

The content on a library database consists mainly of full-text journal articles. For a comparison between the content in a library database and the web, see the chart in **Appendix B**.

In libraries, there are basically two kinds of databases: bibliographic and full text. Bibliographic databases are the bare-bones databases. They usually provide only a citation for an item and, in some cases, an abstract or summary of what the item is about.

Discuss:

What is an example of a bibliographic database? [The online catalog]

Explain:

Full text databases are very similar to bibliographic databases, as they often include abstracts and use essentially the same search interface. The main difference between the two is that a full text database provides instant access to the full text of the journal articles (including any images contained in the article) either in an html or .pdf format. Library databases are designed for ease of use of the information consumer and for prompt retrieval of information. This is in contrast to information found on the Internet, which is not organized in any particular fashion.

Most of the databases in the DeVry Libraries contain abstracts or summaries. While there is not a direct cost for students, the items available in the DeVry library databases are not obtained for free. On the behalf of the students and faculty, the DeVry libraries pay annual subscription fees for the use of these resources. In this FY, DeVry Libraries paid \$____ for the library databases it subscribes to.

Each library database only contains certain formats, types, and amounts of information. To determine what is included in a library database, it is sometimes helpful to click on the links such as: "About [name of library database]," "Database information," "Title list," or "Sources," etc. The links to the library databases on the DeVry Library website also tell a little about them.

Not every library database will have everything. Here are some of the parameters governing database content:

- Document type: This may include periodicals, reports, broadcast transcripts, reference book entries, images etc. Some, such as the educational database called ERIC, will include a large number of unpublished reports. Other library databases are just limited to newspapers.
- Subject: Some, such as *Academic Search Complete*, are quite general; others, such as *Computers and Applied Sciences Complete*, are much more specific in terms of their subject or disciplinary coverage.
- Coverage (timeframe): Some library databases are updated daily, while others only monthly. Some have coverage going back to the nineteenth century; others only have more recent information. As a rule of thumb, the older the record, the less likely it is to be full text/image or even come with an abstract.
- Language: All of DeVry's library databases contain primarily English language sources, though not exclusively. Some contain records or articles in other western European languages, such as Spanish, German, and French.

As was covered in Module One, library databases are comprised of records and each record is made of fields. The fields in different library databases may vary, but most contain fields for author, article title, publication title, keyword, subject heading, date of publication, pages numbers, etc.

Most library databases will automatically allow searching by individual fields, such as author or title. Restricting a search to one or two fields reduces the number of hits, but also produced more precise results.

Facilitate:

For the Build a Database Activity (Hunt & Birks, 2008; Gradowski, Snavely, & Dempsey, 1998), divide the class into groups; have each group read the article selected and circle every word or phrase that could be used to index or describe this article. Add any additional words or phrases that should be used as index terms, but are not in the article. Call on each group to report the words and phrases selected in each category. Write all the terms on the whiteboard.

Most library databases use three to six terms to identify the article. Have each group select the three most appropriate terms from their original list. To help them narrow their choices, have them decide who the audience is for their library database and how the terms they select would vary depending on the audience. Have each group report the three terms it selected.

Discuss:

- How important are subject headings?
- How will the terms they select be used for indexing other articles on the topic?
- Are the terms selected are too narrow or too broad? Are there terms where a synonym might be more appropriate?
- As library database records are broken down into searchable fields, what are the fields that should be constructed for searching this article?
- What fields should they include in their database?
- What makes for a good library database?

Explain:

Search engines such as Google, Bing, and Lycos are often the search option of choice in looking for information on the web. Although these engines index a large number of sites, they are only programmed to crawl in certain directions. To locate the best information, it is important to use a variety of finding tools. Each of these tools has its benefits. However, none is so good and comprehensive that it can be used exclusively.

There are five basic ways to search the Internet:

- Search engines
- Meta-search Engines
- Directories
- Portals

- Various tools that search the deep or invisible web.

Search engines (e.g. Google, Yahoo, and Bing) utilize programs- known as robots, bots, or crawlers- to search out and index sites. After a search term is entered, crawlers respond by looking for sites that contain the search terms entered and then build a list of sites matching those search terms. Most search engines also rank their results by relevance (i.e. appropriateness) using a search algorithm (i.e. set of rules).

Standard search engines include Google, Bing, and AlltheWeb, among others. Search engines are quick and easy to use, but they often miss new sites that have not yet been discovered by their crawlers. Although they have high retrieval rates, they are often low in precision, in that they do not necessarily bring back very exact results.

[Time permitting, you may want to run the same search on a variety of search tools to compare the results with the class]

Meta search engines (e.g. Dogpile, Mamma, and Ixquick) allow multiple search engines to be searched simultaneously, with the results displayed in one combined list. Meta search engines are quick and good for esoteric topics and potentially retrieving highly relevant results as they pull the “best” from several different sources. However, they are unable to handle complex searches, since the individual search engines may have different search protocols. Meta search engines expand the scope of what is possible to search. For example, Mamma.com includes results from web directories and some deep web content (to be discussed later).

Subject directories (e.g. About, BUBL Information service, Best Information the Net) often use people to classify and organize sites by subject categories rather than via a search algorithm. These human eyes consider quality as well as content. The largest directories are found on Google, Yahoo, and About. Additional directories geared for students include: Best Information on the Net, Infomine, and the librarian-facilitated Internet Public Library 2.

Subject directories are easy to use, readily browseable (but usually not fully searchable), retrieve a low number of hits, produce precise results, and may sometimes include sites not found via most search engines. However, their content is occasionally uneven due to their reliance on volunteers to do the work. For the same reason, they are sometimes slow to be updated, contain modest content compared with search engines, and do not deal well with complex or interdisciplinary searches.

Portals (e.g. Wikiversity.org and socraticmethod.net) contain a combination of some of the above-mentioned finding tools and more. They tend to be narrowly focused and are good for specialized topics. Think of them as gateways which provide access to search engines, directories, and news on one site. They are often very personalized.

While large search engines such as Google and Bing search literally billions of sites, billions more sites remain beneath the surface of what search engines retrieve. These “below the surface” sites are known as the “deep web.” By some estimates, the deep web contains more than 500 times the information than what is typically found on the web. The content of deep websites tends to be more specialized than conventional sites. More than half of the deep web content is found on topic-specific databases and is password protected or requires registration, which is why crawlers cannot access them (Gavin, 2008).

Henninger (2003) says there are five basic types of information found on the deep web:

1. Dynamically generated html pages that are created collaboratively on an ad hoc basis
2. Non-html formats such as Shockwave files as well as programs (.exe), compressed files, spreadsheets and some .gif and .jpeg files
3. Ephemeral information that is time sensitive such as current news or stock quotes
4. Grey Literature and other information, such as technical reports not published by commercial entities
5. Database content in publically accessible data bases on the web. Databases often contain much of the information in the other four categories. Search engines are not able to search within these to index their contents.

Sites that access information ignored by many search engines include:

- DOAJ: Directory of Open Access Journals (<http://www.doaj.org/>) is an index to free refereed online scientific and scholarly journals from around the world
- Scirus (<http://www.scirus.com/>) describes itself as “the most comprehensive scientific research tool on the web”
- Turbo 10 or T 10 (<http://turbo10.com/>) is a meta-search engine that crawls the deep web
- *100 Useful Tips and Tools to Research the deep web* (<http://www.online-college-blog.com/index.php/features/100-useful-tips-and-tools-to-research-the-deep-web/>)

Facilitate:

For the “I Never Meta-search Engine I Didn’t Like” Assignment (**Appendix C**), students will compare a directory, a search engine, a portal, and a meta-search engine (list provided).

This assignment has the potential to be fairly involved and should be scored with the seriousness that reflects the depth to which the student ought to familiarize her/himself with the various search tools.

Step 2: Search Strategies

[25 minutes]

Demonstrate:

For the Putting English into Search Terms Activity (Sittler & Coo, 2009; Jacobson & Gatti, 2001), write this question on the white board: “Do people who start smoking as teens have a greater risk of developing cancer than those who begin smoking later in life?”

Then key this question verbatim into EBSCOhost *Academic Search Complete*, but **before** entering it, ask the students how many results they expect- the higher the number, the better. Enter the search as is and act stunned where there are none.

Discuss:

Why were there no results? {Steer the discussion toward the difference in library databases and Google and keyword searching as opposed to natural language searching}

Ask the students to identify the key words in the question. If they are reluctant, begin by crossing out the unimportant words. Ultimately the question should be narrowed down to “smoking,” “teens,” and “cancer,” at a minimum.

Explain:

Using the proper search term or phrase(s) is a crucial component of the research process. These are the keys which can unlock much of the information needed. Selecting the right terms or phrases can be challenging and even confusing. Some terms are very specific. Medical and engineering terms are often precise in their meaning and, in some cases, lives depend on using these words correctly.

Other terms have become so widely integrated into everyday speech that searching them provides too many contexts to be very useful. The term “interface” can be widely applied to many different fields. Some terms, such as “tolerance”, have distinct meanings and are widely recognized—though seen from a variety of perspectives. Some terms, such as “Shakespeare” or “health care,” refer to topics that are very broad (UC Berkeley, 2009; Gavin, 2008).

Facilitate:

Sometimes a word can mean more than one thing. Write the word “Dove” on the whiteboard and, without pronouncing it, ask the class the meaning of this word. Responses could include, for example:

- The past tense of “dive”
- Someone’s last name or first name
- A political label for someone opposite a hawk
- A brand name for chocolate products
- A brand name for skin- an hair-care products
- A music award
- Any number of organizations
- A bird

Sometimes a thing can have more than one word to refer to it: ground OR soil OR land OR earth OR dirt

Explain:

Many search engines, such as Google, do a reasonably good job in searching for information the way someone might search for it by asking another person. Asking “Why does terrorism exist?” will pull up any number of sites which seek to address this question in one form or another with varying degrees of success. But, there are also lots and lots of false hits—results that are unwanted, unnecessary, or irrelevant.

Library databases use a different approach for searching. While they do require more careful planning than a typical search engine, they are much better suited for managing results with greater precision. Library databases use like or similar terms and phrases to retrieve information.

There are two options when searching terms or phrases: free text/natural language or controlled vocabulary searching. Free text or natural language searching involves searching for any relevant word or phrase that might appear in a record. This usually produces high retrieval

results, but often pulls up extraneous hits, too. The following fictional headlines demonstrate how searching for a free text term or phrase might miss other potentially important articles. Each of these headlines refers to essentially the same age group of people:

- “Teen Violence on the Rise.”
- “Officials: Youth Crime Wave yet to Peak.”
- Juvenile Delinquency Increasing, Study Says.”
- “More Adolescents Arrested.”
- “Gen Z Runs Amuck”

However, any one or more of these could have been missed with a free text search, unless an intrepid researcher thought to search for all five of these terms! Free text searching requires entering the different terms that could be used to identify the same topic.

Free text searching is good for new or unique terms or phrases. It is also good for teasing out subtle or nuanced results from a search. In the sample search above, the phrase “tobacco use” might easily have been used for “smoking.” There are variations on smoking that could be used too such as “smoke,” “smokers,” and “smoked,” for example. Other terms for cancer might include: “cancer,” “cancerous,” “neoplasm,” “carcinogenic,” etc. Simply put, a number of terms can be used just for one fairly simple search.

Discuss:

What would happen if you wanted to search for all of those terms?

Explain:

To prevent entering each of these words in every possible combination for every search, there are a number of shortcuts that can be used. Some of these shortcuts will be examined as they apply to searching EBSCOhost (Note: although the specific shortcuts may vary from database to database, the concepts remain the same.):

- Truncation simultaneously searches many variations of a single word. For example, to find all the variations of the word “smoke” (e.g., “smoker,” “smokers,” “smoking”) the word “smoke” would be typed, followed by an asterisk (*). Thus, entering the term “smoke*” will pull up all the variations of the word “smoke” listed above. Truncation can pull up false hits too. Searching “Bank*” will retrieve articles about banks, bankers, banking, as well as the topics of banknotes and bankruptcy; the personal name, Bankhead; or the website, bankofamerica.com, etc.
- A wild card searches for similar words or various spellings of a word. In EBSCOhost, the question mark (?) serves this purpose. For example, if the proper spelling of the US Senator Harry Reid was forgotten, it could be entered as “Re?d”; this would retrieve articles by and about Harry Reid. However, that search would yield “Reed,” and “Read”, as well.
- The pound sign (#) in EBSCOhost searches for alternate spelling of words which may contain an extra character--as is often the case with British English. For example, searching for “colo#r” will yield records containing the word color (US spelling) and colour(British spelling).

- In Google, the asterisk (*) is used to fill in for a missing word in a phrase. Entering the search string: “Love makes the *” will retrieve, “love makes the world go ‘round,” “Love makes the rules,” and “Love makes the day,” etc.

Rather than look for words or phrases anywhere they appear in a record, library databases seek to organize like or similar information together for the sake of clarity by using controlled vocabulary searches. Controlled vocabulary searching utilizes a set of predetermined subject headings, subject terms, or descriptors to organize similar articles together. The library database will assign these selected terms or phrase to articles. It is like putting all of these similar or closely related articles in a subject silo. Opening that silo will result in output all on the same topic. This is often more efficient than looking across a whole field for good articles to glean.

Records in library databases are also organized by subject, both general and specific (e.g., “business,” and “strategic planning,” or “information systems” and “signal processing”). This is often a much more efficient way to search than by keyword. Subject searching can avoid extraneous results. However, the results may not be as precise as compared to keyword searching.

New words or phrases have to incubate for a while before they become subject headings. Indexers want to be sure a subject heading will serve searchers for years to come and not just be a passing catch phrase. For example, the word “bromance” can be searched as a free text term with success, but not as a subject heading. Instead, the subject headings “friendship” or “masculinity” are used. While not as exact in meaning, these terms will be around for years to come. For example, “Cloud Computing,” “Climate Change,” and “Twitter” are newly added subject terms in the online catalog.

See **Appendix D** for instructions on how to search subject headings in EBSCOhost. The following chart highlights the important facets of Keyword Searches and Controlled Vocabulary Searches:

<i>Keyword Search</i>	<i>Controlled Vocabulary Search</i>
Flexible: can search by any word	The subject terms may be too broad for a very precise search topic
Useful at the beginning of a project when the search vocabulary is not known	The exact term must be used and entered correctly
Downside: search will fail if you do not use the correct keyword(s).	Useful for reducing false hits—terms that match, but do not pertain to the subject

(Tensen, 2007)

No one search technique is going to universally work in all situations. Often times, a combination of techniques is going to be required. Searching is part art and part science, and certain techniques work better for different people.

It's a good idea to keep a list handy of the search terms you used- indicating which ones worked well and which ones didn't- for use with other library databases.

Another major way of expanding and narrowing the results of a search in library databases is through use of Boolean Logic. Boolean Logic is named for its inventor, George Boole, a Victorian-era teacher, philosopher, and mathematician. Boolean Logic uses the words “AND,” “OR,” and “NOT” [sometimes designated as “AND NOT”] which are referred to as *operators*. These three words are crucial in helping expand and narrow searches.

Each Boolean operator works differently:

- Use of the operator “OR” in a search would result in articles having any of one or more search terms entered. For example, a search looking for articles about “dogs or cats” would contain articles about either dogs or cats (see Figure 1 below).

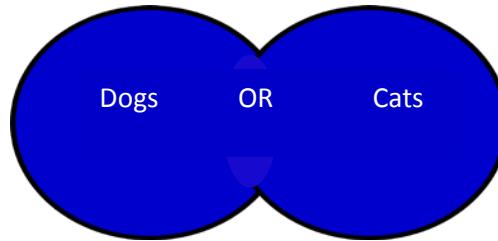


Figure 1

- Use of the “AND” operator in a search (e.g., “dogs AND cats”) would result in articles that contain both terms , as illustrated in Figure 2 below.

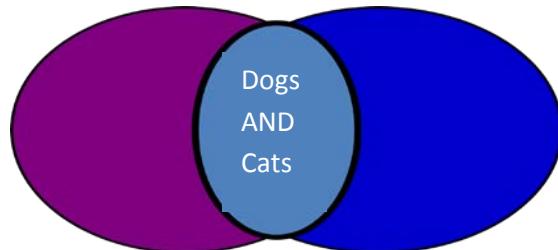


Figure 2

- Use of the Boolean operator “NOT” excludes articles from a search (e.g. “dogs NOT cats”), as illustrated in Figure 3 below

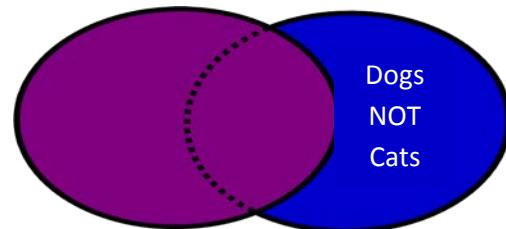


Figure 3

Facilitate:

Do a quick demo of Boolean logic with the class. Have the students who are either male OR female stand up. Comment on how OR retrieves broad results. Have everyone sit down.

Have the students who are male AND wearing blue stand up. Comment on how this will reduce results. Keep this group standing.

Now have the set of males wearing blue NOT wearing glasses remain standing. Comment on how this can also be used to reduce results.

Facilitate:

In the Question Analysis Activity (Gradowski et al., 1998), students will complete a concept chart to learn the reasons for using specific terms when conducting a search (**Appendix E**).

In the Vertical and Horizontal Thinking Exercise (Gradowski et al., 1998), students will demonstrate their comprehension of Boolean operators (**Appendix F**).

For the Comparing Subject Terms by Library Database Activity (Gradowski et al., 1998), assign each of the groups one of the EBSCOhost databases and the OPAC.

Have them look up the same topic (Examples: *How do hurricanes affect tourism? Are hurricanes linked to global warming? How did Hurricane Katrina change FEMA's response protocols to natural disasters? Are most hurricane victims the poor and disadvantaged? What is the cost of hurricane clean up? etc.*) in library databases such as Medline, Business Source Complete, Soc Index, etc.

Discuss:

- What subject terms/descriptors did you find in your library database worked best?
- How do you account for these differences?
- How can you be sure you are using the best terms in searching a library database?

Explain:

The Boolean operators and the use of symbols such as the asterisk (*) for truncation and the question mark (?) for a wildcard can be used in combination to create search strings.

Using search strings will result in more sophisticated searches from the library databases, as well as help in searching search engines more effectively. A search string allows the search concepts to be manipulated for more precise retrieval results.

Nesting uses parentheses to separate parts of a search and keep one part of a search from being confused with another part. In using the OR operator, it is often good practice to employ nesting, or put the terms that are being combined with the OR together so the computer can tell that they need to be manipulated together. In a larger search for information on drugs or alcohol, the search would be entered as: (drugs OR alcohol).

Another tip in constructing search strings is to enter phrases in quotation marks. This tells the computer that those two words should be searched together- exactly in that order- as a phrase. Terms such as working mothers, oil rigs and capital punishment would best be entered as "working mothers", "oil rigs," and "capital punishment". In EBSCOhost, search strings can be entered in the Basic search box or in the Advanced search boxes.

Discuss:

What results would you expect from each of the following search strings?

- Elderly AND (“Mercy killing” OR Euthanasia)
- “working mothers” AND (Children NOT adolescents)
- (“corporal punishment” OR spanking) AND effect* AND (Children OR Youth)

Facilitate:

For the Search String Activity (Hunt & Birks, 2008), write the following search strings on the whiteboard and have the students find the mistakes in each one.

- Credit card AND rating {"Credit card" should be in quotation marks}
- Capitol punishment AND (abolish OR “deter”) {Capitol is the incorrect homophone, “Capital punishment” should be spelled correctly and in quotation marks, the lone quotation mark is not needed}
- “oil drilling” AND (health OR environment). {There should not be a period at the end of the string}
- “Health care” OR (Children, Youth AND Teens) {the OR should be an AND; the comma should be an OR and the AND should be an OR}
- Spider AND web {needs to be narrowed with more precise search terms—this search will retrieve articles on the Internet as well as arachnids. This is an example of needing to use a controlled vocabulary search}

Step 3: Retrieving Information.

[25 minutes]

Demonstrate:

Demonstrate how to save results from a search, using the instructions in **Appendix G**.

Explain:

In addition to EBSCOhost, other databases-such as ProQuest and LexisNexis- would be worthwhile to explore. For reference, there is a comparison and contrast chart of the three major library databases in **Appendix H**.

Facilitate:

For the Library Database Discovery Project (**Appendix I**), students will each be assigned a library database, including non-EBSCOhost resources. Students are to report back on the content, design, time period covered, audience, search capabilities (basic and advanced), and retrieval options for the library database.

{Scoring is based on the completeness and accuracy of the report the students write as well as their following the conventions of the English language}

Explain:

Although the Library is a gateway to the world of information, there are also various options to obtain that information if it is not housed locally. This may include looking for government resources, finding statistical data, or contacting an expert or organization.

Demonstrate:

The US Federal Government is an incredibly large producer of information. Here are some tools that can help locate some of what they have on the web:

- The *Catalog of U.S. Government Publications* (<http://catalog.gpo.gov/F?RN=213883706>) is the leading finding aid for federal publications. While it indexes all publicly available governmental publications, it only provides web access to a limited number of sources.
- *FedWorld.gov* (<http://www.fedworld.gov/index.html>) is a major gateway to government information and is managed by the National Technical Information Service (NTIS).
- *USA.gov* (<http://www.usa.gov/index.shtml>) is the U.S. government's official web portal, but is designed for the general public rather than the serious researcher.
- *THOMAS* (<http://thomas.loc.gov/>) is the Library of Congress' website for legislative information.
- *Google Uncle Sam* (<http://www.google.com/unclesam>) automatically limits a Google search to US government sites

Demonstrate:

Beyond traditional resources, statistical data can be a beneficial source of information. There are many sources that can be used to locate statistical information. A well-known example is the Statistical Abstract of the United States (<http://www.census.gov/compendia/statab/>).

Explain

Calling upon expert advice can also be a great tool for a research. Once an expert or authority is located, contact them to set up an interview. Remember, they are busy people-interviewers will want to be respectful of their time. **Appendix J** has some tips on interview etiquette. There are a number of quick ways to find an expert or a place where s/he might work.

Demonstrate:

There are many ways to find an expert or authority in a field:

- If the library has the print version of the *Encyclopedia of Associations*, demonstrate how that works.
- “Biography Reference Center” is available online to DeVry Students. There is a “Biographies by Genre” option on the homepage. In the Advance Search mode, there is a search function for “Occupations” which can help narrow results for experts.
- An online 800 phone directory or yellow pages may also reveal an expert.

For further assistance on contacting experts or conducting good surveys, students can consult their DeVry Librarians and professors.

Step 4 Discuss: Revising the Search Strategy

[10 minutes]

Explain:

One of the challenges of research is knowing when a search should be revised. From the retrieval results, students need to be able to assess the quality, quantity, and relevance of the

search results they are obtaining to determine if they need to employ alternate methods. They also need to look for gaps in information obtained to determine if there are points they are missing. From there, a decision can made on if and how the search should be revised.

The need to revise will vary based on the scope and nature of the topic, as well as any number of other variables. Ultimately, the student, in conjunction with his or her professor, will need to make these sorts of decisions.

Facilitate:

In the Time to Refine Assignment (**Appendix K**), students are to analyze the content of the three listed sources and decide if the search answers the research question.

{Scoring this assignment focuses on the student correctly assessing the shortcomings of the three articles in writing a cogent paper on the assigned topic. One article looks at libertarian rather than religious objections to vaccinating home schooled children; another does look at objections raised by one religious group, but is insufficient to write a paper by itself; and the third article is too dated. The research should be revised and continued. Run the searches provided by the students to see if the results are sufficient. Verify that the citations follow APA standards}

Step 5: Citing using NoodleTools

[15 minutes]

Explain:

There are a variety of ways to cite sources. DeVry requires that all citations be in APA format. As with any citation system, it takes some getting used to. However, there is an excellent tool that helps create APA citations: NoodleTools.

Facilitate:

Using NoodleTools, compose a citation for each of the three sources used in “Time to Refine?” exercise (**Appendix K**), and submit them with the assignment. To log in to NoodleTools, students should use their D# as the username, and their birthdate in YYYYMM form as the password. When creating a bibliography, select APA Advanced for the style.

Conclude: Module Two addresses using a variety of methods to search for information, and evaluating sources not only for quality and accuracy, but also for relevance to the initial query.

Resources Used:

Burkhardt, J. M., MacDonald, M. C., & Rathemacher, A. J. (2003). *Teaching information literacy: 35 practical, standards-based exercises for college students*. Chicago: American Library Association.

Gavin, C. (2008). *Teaching information literacy: A conceptual approach*. Lanham, MD: Scarecrow Press.

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- Jacobson, T., & Gatti, T. H. (2001). *Teaching information literacy concepts: Activities and frameworks from the field*. Active Learning Handbook Series: No. 6. Pittsburgh, PA: Library Instruction Publications.
- Manuel, K. (2006). *Information literacy course handbook for distance and in-class learners*. Active Learning Handbook Series: No 1. Pittsburgh, PA: Library Instruction Publications.
- Riedling, A. M. (2007). *An educator's guide to information literacy: What every high school senior needs to know*. Westport, CT: Libraries Unlimited.
- Sittler, R., & Cook, D. (2009). *The library instruction cookbook*. Chicago: Association of College and Research Libraries.
- Tensen, B. L. (2007). *Research strategies for a digital age*. Boston, MA: Thomson.

Appendix A: Pre-Search Analysis

Adopted from “Search Strategy,” (Riedling, 2007).

The pre-search analysis is a guideline whose purpose is to help you focus on what information you may already have. It also helps set you up for some of the subsequent work you will undertake in your research.

Pre-Search Analysis
What is your topic:
What unique words, specific names of people and/or organizations, or abbreviations/acronyms are associated with your topic?
What professional societies,

agencies, organizations, or groups might have information on your subject?

What resources, articles, web sites, news stories, etc. do you already have about this topic—what leads can you gain from them?

Appendix B: Comparing & Contrasting Library Databases and the World Wide Web Search Engines		
	Library Databases	World Wide Web & Search Engines
Function	<ul style="list-style-type: none"> Designed for targeted audience Reliable source of current credible information Integral component of the research process 	<ul style="list-style-type: none"> Provide access to unmanaged information
Content	<ul style="list-style-type: none"> Copyrighted, licensed proprietary, and subscription-based resources, Including: <ul style="list-style-type: none"> Scholarly journal articles Popular magazine articles Newspaper articles Reference book entries Technical publications News Transcripts <p>Often provide cover-to-cover coverage of journals.</p> <p>One-Stop-Shopping –library databases facilitate the searching of tens-of-thousands of periodicals simultaneously.</p>	<ul style="list-style-type: none"> Popular web sites (e.g., Wikipedia, Facebook) Commercial web sites (e.g., eBay, Amazon) Government, educational, and organizational web sites (e.g., The White House, DeVry.edu, American Cancer Society) Current news & information (e.g., MSNBC, Fox News) Email, chat (e.g., AOL, AIM) Directory information (e.g., yellow pages) Personal sites and blogs Open access publications Book excerpts and public domain books
Content Review Process	<ul style="list-style-type: none"> Content is from established and reputable publishing firms. Articles and books written by journalists, professionals, or experts in a particular field. Content goes through an editorial or peer review process 	<ul style="list-style-type: none"> Open access with no editorial or review process. It is incumbent on the user to review and evaluate the content
How often is it updated?	<ul style="list-style-type: none"> Regularly--from daily to quarterly or even annually. 	<ul style="list-style-type: none"> Varies: is not always apparent when information is posted Currency and recency of information is uncertain Dead links
Supported by:	<ul style="list-style-type: none"> Library databases are paid for by your tuition--so the cost is transparent to you. Free of advertising 	<ul style="list-style-type: none"> Search engine costs are paid for by advertising including paid inclusion, contextual advertising, search engine optimization, paid placement, and paid inclusion. The search engine may direct you to fee-based sites.
Usability	<ul style="list-style-type: none"> Search results are easily manipulated The parameters of the search are 	<ul style="list-style-type: none"> Means to manage search are not apparent Difficult to search within results

	<ul style="list-style-type: none"> easily controlled Results can be printed, saved, emailed, or downloaded Can retain search results and receive updates on searches 	<ul style="list-style-type: none"> Results can be printed, saved, or bookmarked
Retrieval based on	<ul style="list-style-type: none"> Well organized hierarchical subject indexing for consistent searching 	<ul style="list-style-type: none"> Changing search algorithms Dependant on where the search engine crawls Manipulated relevance rankings
Constancy / Permanence / Stability	<ul style="list-style-type: none"> Highly stable: content from journals, magazines, newspapers and books is digitally archived 	<ul style="list-style-type: none"> Website content is subject to change and even disappears
Customer Support	<ul style="list-style-type: none"> Numerous finding aids and help functions 1-800 support 	<ul style="list-style-type: none"> Limited help support and contact

Appendix C: "I Never Meta-search Engine I Didn't Like."

For this assignment, you will be assigned a directory, a search engine, a meta search engine and a portal. Answer the questions on the chart below for each. Samples for each category are on the following page.

	Directory:	Search Engine:	Meta-Search Engine:	Portal:
Scope—what topics are covered and what are not?				
What formats does it search?				
Is there anything it does not search?				
How are the top results determined?				
Does it support Boolean searching?				
What symbol for truncation is used?				
Is "exact searching" allowed?				
How recent are the results?				
What advanced search features are supported?				
Are results likely to be of use to university students? Explain				
What special features does it have?				
Compare/Contrast this resource with the other two				

Sample Internet Directories

4NI <http://www.4ni.co.uk/>
Anthony Parsons
<http://www.anthonyparsons.com/>
Directory of Dating
<http://www.directoryofdating.com/>
DMOZ <http://www.dmoz.org/>
Infomine <http://infomine.ucr.edu/>
Internet Public Library <http://www.ipl.org/>
Internet web Directory
<http://www.internet-web-directory.com/>
Intuite <http://www.intute.ac.uk/>
Jayde <http://www.jayde.com/main.html>
Link Centre <http://linkcentre.com/>
Muslims Internet Directory
<http://www.2muslims.com/directory/>
My Directory <http://www.infrasec-conf.org/>
Ro Ask <http://www.roask.com/>
So Much <http://www.somuch.com/>
TXT Links <http://www.txtlinks.com/>

Sample Search Engines

Alexa <http://www.alexa.com/>
Alibaba <http://www.alibaba.com/>
Amatomu <http://www.amatomu.com/>
AO Soft <http://www.ao-soft.com/>
Ask <http://www.ask.com/>
Autonomy <http://www.autonomy.com/>
Baidu <http://www.baidu.com/>
Cha cha <http://www.chacha.com/>
Gigablast <http://www.gigablast.com/>
Hakia <http://hakia.com/>
Ice Rocket <http://www.icerocket.com/>
Indeed <http://www.indeed.com/>
KelKoo <http://www.kelkoo.com/>
Mahalo <http://www.mahalo.com/>
OMGILI <http://omgili.com/>

Sample Meta Search Engines

All+ <http://allplus.com/>
Draze <http://draze.com/>
Entire Web <http://www.entireweb.com/>
Iboogie <http://www.iboogie.tv/>
In Crawler <http://incrawler.com/>
Infogrid <http://www.infogrid.com/>
Ithaki <http://www.ithaki.net/indexu.htm>
Kartoo <http://www.kartoo.com/index.php>
Meta Crawler <http://metacrawler.com/>
Polymeta <http://polymeta.com/>
QK Search <http://www.qksearch.com/>

SurfWax

<http://lookahead.surfwax.com/index-2011.html>
Unabot <http://unabot.com/>
Vroosh <http://vroosh.com/>
Zuula <http://zuula.com>

Sample Portals

Accounting Web
<http://www.accountingweb.com/>
B2B Marketing Online
<http://www.b2bm.biz/>
Buzzle <http://www.buzzle.com/>
Cplusplus <http://wwwcplusplus.com/>
Electrical & Computer Engineering Subject Portal
<http://www.ulib.csuohio.edu/research/portals/eleeng-m.html>
Electrical Engineering Portal
<http://electricalengineeringportal.com/>
Game Coding Complete
<http://www.mcshaffry.com/GameCode/>
Go2net <http://www.go2net.com/>
Links WS <http://www.links.ws/portal-sites.htm>
MJ's Star trek Portal <http://www.mjs-startrek.com/>
Scifislacker <http://www.scifislacker.com/>
SiFy <http://www.sify.com/>
The Business Portal
<http://www.thebusinessportal.com/>
The Internet Portal
<http://www.theinternetportal.com/>
WizardsPro <http://www.wizards.pro/>

Appendix D: Searching by Subject Headings in EBSCOhost

This appendix provides instructions on how to find/search a list of subject headings in EBSCOhost.

- 1) Click on the “Subject Terms” link at the top of the page (see Figure 1 below).

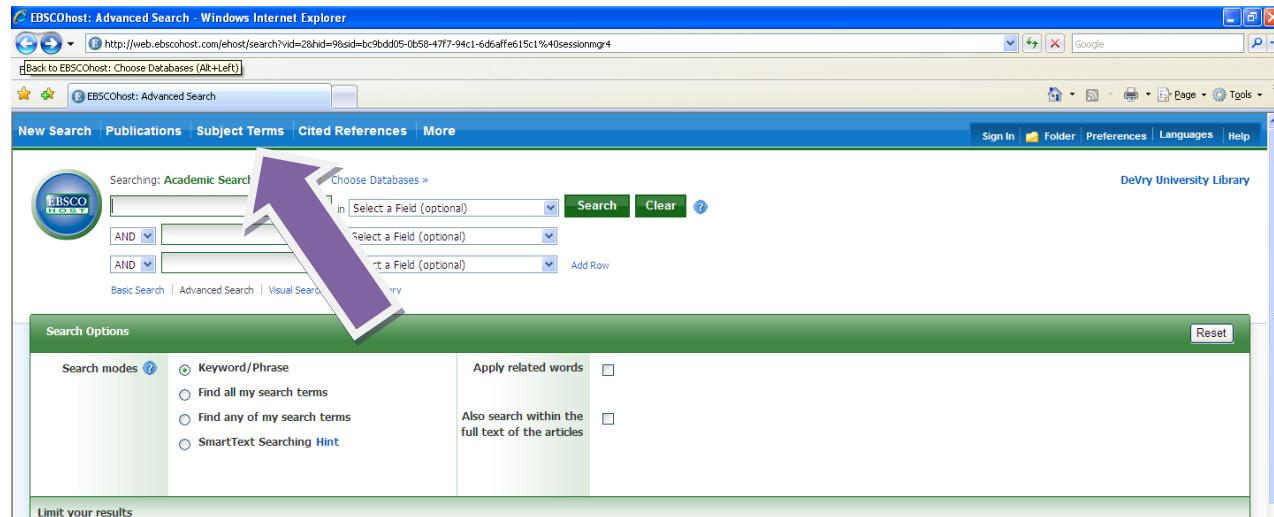


Figure 1

- 2) This will take you to the subject terms page (see Figure 2 below). Enter your search terms in the **Browsing window**. The default is: Term Begins With, which is the example we will use. You could also select the **Term Contains** radio button to look for a word or phrase anywhere it appears in a subject heading or the **Relevancy Ranked** button to post the most relevant headings first. Once you have entered your term and selected how you want the term searched click **Browse**.

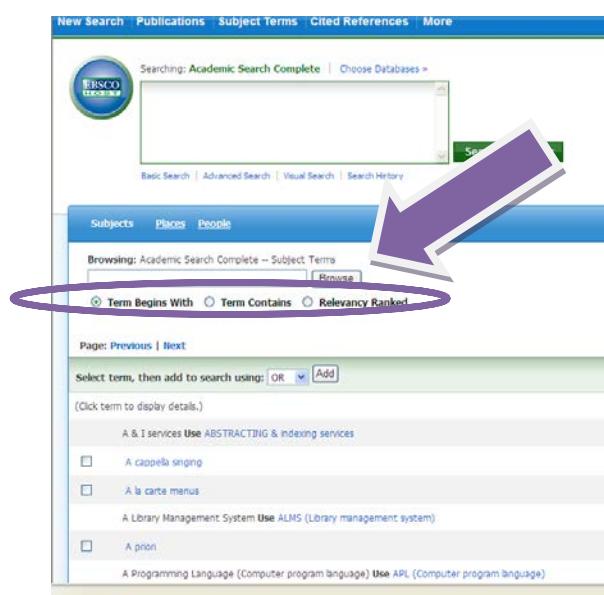


Figure 2

{Note: For demonstration purposes, search just Academic Search Complete in EBSCOhost, as different library databases have their own distinct thesauri}

- 3) A list of headings is displayed (Figure 3). A list of subject terms is produced. The terms displayed as links can be searched. Those not displayed as links will provide a linked term to search

instead. The Explode option(circled on Figure 3) “explodes” or expands a subject heading and displays other subject headings (i.e., broader, narrower and related) linked to that term.

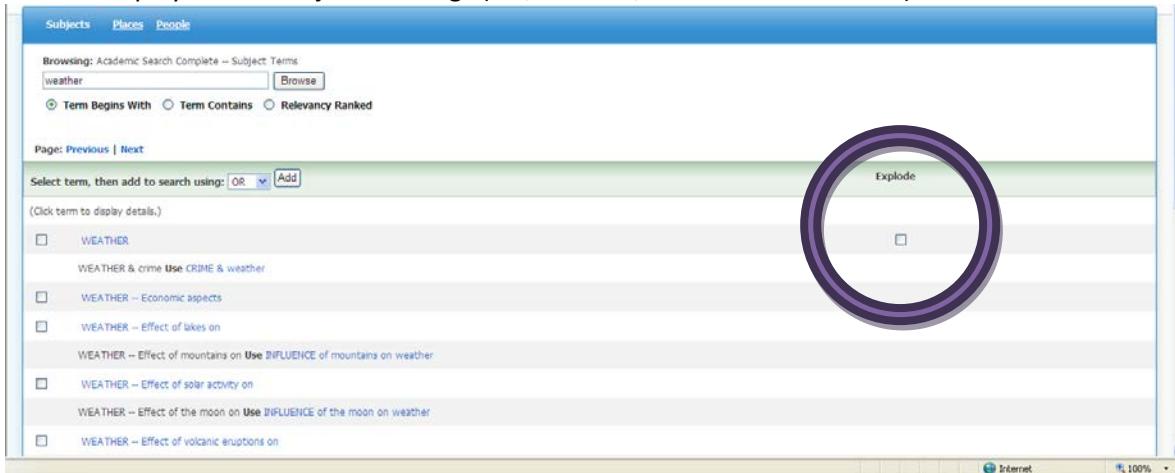


Figure 3

- 4) The following terms can be seen in Figure 4 (below):

The Scope Note -- explains how the term is used and what it includes and excludes.

Broader Terms—these are terms that have a wider or more encompassing meaning.

Narrower Terms—more specific terms or terms that look at a more exact topic.

Related Terms- are terms that in a hierarchy would be at a horizontal level. These terms are often similar in scope and for allied topics. These are not necessarily synonyms.

Used For (not shown)—as these terms are not used as part of the controlled vocabulary, they would not be good choices for searching

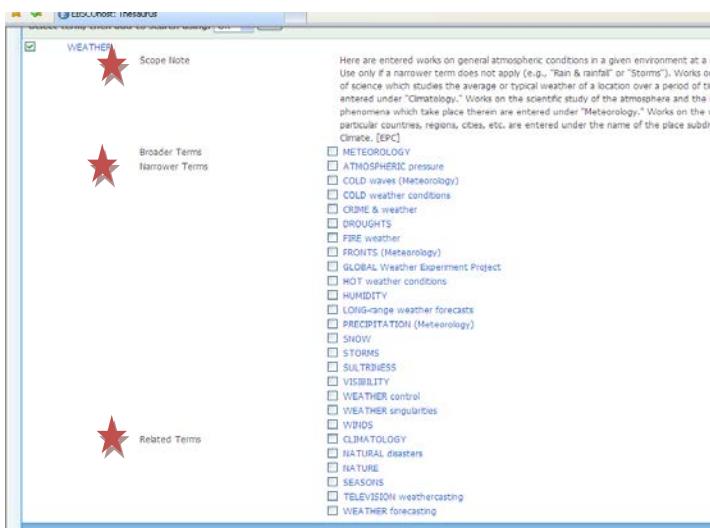


Figure 4.

- 5) To actually search one or more of these subject headings, you can enter them in the Search window at the top of the screen or click on the headings you are interested in, select “OR,” “AND,” or “NOT” and click ADD. The selected terms will appear in the search window and from there you can click SEARCH (See Figure 5). The importance of “OR,” “AND,” & “NOT” will be discussed in a little bit.

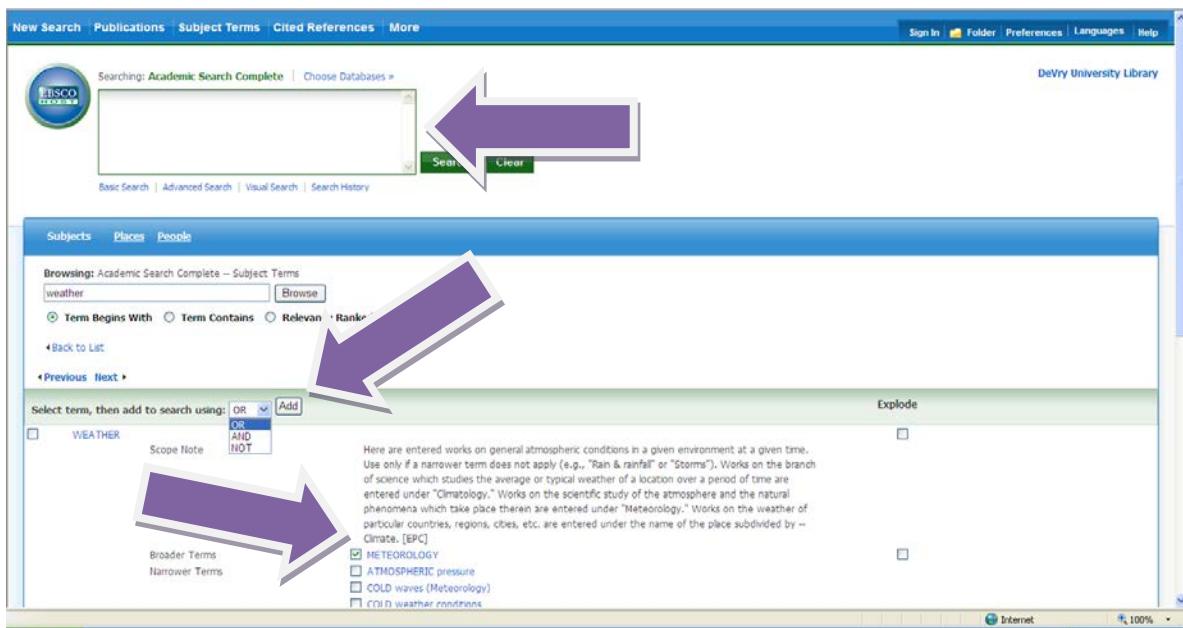


Figure 5

- 6) Another search method found in EBSCOhost is *Field Searching*. Field Searching allows you to limit your search to a particular field. Click on the drop down menu next to the search window (see Figure 6 below).

There are a number of important fields that can be searched. Some of the major ones are:

- TX All text—searches all the text fields in a record
- AU Author—searches just the author field.
- TI Title —searches the title of the article NOT the title of the magazine or journal
- SU Subject Terms—searches the subject headings
- SO Source- searches the title of the magazine or journal in which an article appears

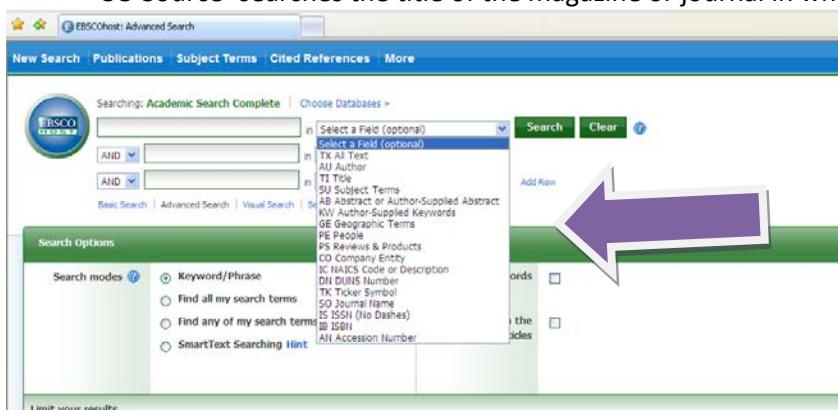


Figure 6

- 7) If you enter a search in EBSCOhost and the results are too broad, you can narrow your result, using the function bar to the left of the screen(see Figure 7 below).

Results can be limited to just full text results (.pdf and/or html), records with references, and/or peer reviewed journals. In addition, the slider bar can be used to limit results by publication date.

Results can also be limited by the type of source, e.g. academic journal, magazine, newspaper, book, or book review.

The screenshot shows the EBSCO Academic Search Complete interface. A purple oval highlights the left sidebar where 'Source Types' are listed under 'Refine your results'. The results list shows three entries:

- Cold Weather, Hot Handball**: By COREY KILGAMION, New York Times, 12/5/2010, p4, 0p. Handball is New York City's quintessential street game, and for nearly a century, the city has produced many of the best players in the world. In the summer, the talent is spread out over the rou...
- Holiday Books: Paris**: By CAROLINE WEBER, New York Times Book Review, 12/5/2010, p49, 0p. "The sky of Paris," Edith Piaf once sang, "is never cruel for long." With this lyric, the chanteuse has both bad and good news for anyone who has ever -- over the course of a week, a day or e...
- Obama Drops In on Troops in Afghanistan, but Weather Has Its Own Surprise**: By PETER BAKER; Aliza J. Rubin contributed reporting from Kabul, Afghanistan., New York Times, 12/4/2010, p4, 0p. CORRECTION APPENDED WASHINGTON -- President Obama swept into a dark and windy Afghanistan on Friday for a surprise holiday season visit with troops as the nine-year American-led war heads into a ...

Each result includes a 'Date Descending Sort' button, a 'Page Options' button, and an 'Alert / Save / Share' button.

Figure 7

- 8) Your results will come back with the most recent articles displaying first—reverse chronological order. You can also sort your results so the oldest articles display first; sorted alphabetically by author or source; or by relevancy. (Figure 8).

The screenshot shows the same EBSCO interface as Figure 7. A purple arrow points to the 'Page Options' button in the top right corner of the results list. A dropdown menu is open, showing sorting options: 'Date Descending' (which is selected), 'Date Ascending', 'Author', 'Source', and 'Relevance'.

Figure 8

- 9) You can also select how many results are displayed on one screen or the format of the page by selecting “Page Options” (Figure 9).

in [Select a Field (optional)] Add Row

Advanced Search | Visual Search | Search History

Page: 1 2 3 4 5 Next

1. Cold Weather, Hot Handball.

By: COREY KILGANON. New York Times, 12/5/2010, p4, 0p

Handball is New York City's quintessential street game, and for nearly a century the city has produced talent spread out over the rou...

Database: Academic Search Complete

Add to folder

HTML Full Text

2. Holiday Books: Paris.

By: CAROLINE WEBER. New York Times Book Review, 12/5/2010, p49, 0p

"The sky of Paris," Edith Piaf once sang, "is never cruel for long." With this book, the chanteuse has course of a week, a day or e...

Database: Academic Search Complete

Add to folder

HTML Full Text

3. Obama Drops In on Troops in Afghanistan, but Weather Has Its Own Ideas.

By: PETER BAKER; Alissa J. Rubin contributed reporting from Kabul, Afghanistan.. New York Times, 12/7/2010, p4, 0p

CORRECTION APPENDED WASHINGTON -- President Obama swept into a dark and windy Afghan capital on Saturday for a surprise helicopter visit with troops as the nine-year American-led war heads into a ...

Database: Academic Search Complete

Add to folder

Result Format: Standard, Title Only, Brief, Detailed

Image QuickView: On, Off

Results per page: 5, 10, 20, 30, 40, 50

Page Layout: 3 Columns, 2 Columns, 1 Column

Related Images

Find More

Figure 9

Appendix E: Question Analysis

(Gradowski et al., 1998, pg. 57)

As you think about the terms to use in your search, it helps to break them out into different categories in order understand what terms might best serve you in your research. This involves a process very similar to what we saw with the exploded subject headings in EBSCOhost.

For each of the concepts in your search , think about synonyms or related terms; broader terms, and narrower terms for your subject.

Fill out one of these for each of your concepts.

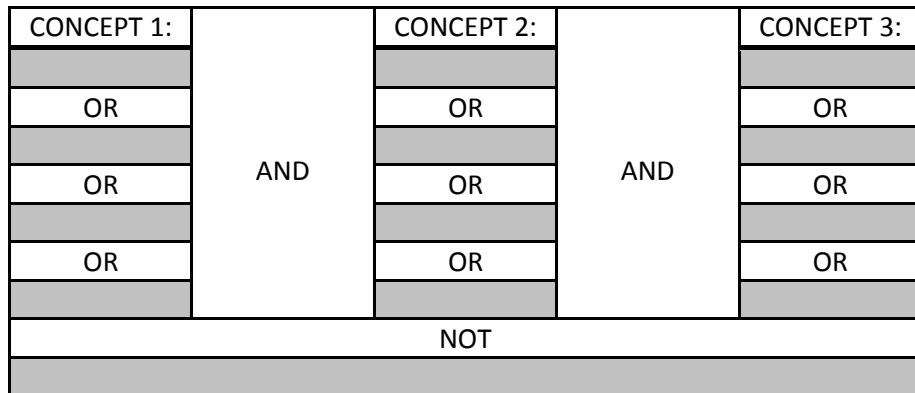
CONCEPT	Broader Terms:
	Related Terms:
	Narrower Terms:

Appendix F: Vertical And Horizontal Thinking

(Gradowski et al., 1998)

Once you actually begin your search you will find the concepts which will work best for you. As you do it helps to think about how you can combine these using Boolean operators.

Construct a sample search. You will not need to include all of your terms. The point of the exercise is not to see how terms you can stuff into one may box, but rather to make sure you understand the principles involved in searching.



{Scoring this assignment will be based on the seriousness and thought with which it is completed}

Appendix G: Saving Search Results

As you peruse your results on EBSCOhost or other library databases, there are various options to select the results you want to keep. Following are instructions on how to save your search results.

- 1) In EBSCOhost, you need to click on the “Add to Folder” icon by each entry (Figure 1). This will save the article temporarily for you and allow you to gather the articles you like before making your final selections for the ones you want to keep.

PDF Full Text (2.6MB)

14. Toward the Probabilistic Simulation of Storm Surge and Inundation in a Limited-Resource Environment.

By: Davis, Justin R.; Paramygin, Vladimir A.; Forrest, David; Sheng, Y. Peter. Monthly *Weather* Review, Jul2010, Vol. 138 Issue 7, p2953-2974, 22p, 1 Diagram, 6 Charts, 13 Graphs, 4 Maps; DOI: 10.1175/2010MWR3136.1

To create more useful storm surge and inundation forecast products, probabilistic elements are being incorporated. To achieve the highest levels of confidence in these products, it is essential t...

Subjects: STORM surges; FLOODS; RESEARCH; NATURAL disasters; HYDRODYNAMICS; FLUID dynamic measurements; FLUID dynamics; METEOROLOGY -- Observations

Database: Academic Search Complete

Show all 24 images

Add to folder PDF Full Text (7)

15. Weather Warnings: History in Action.

By: Smith, Mike. Weatherwise, Jul/Aug2010, Vol. 63 Issue 4, p38-42, 5p, 1 Color Photograph

The article focuses on first successful tornado forecast done by meteorologists Ernie Fawbush and Robert Miller in Oklahoma on March 25, 1984. It highlights the move of the Weather Bureau to esta...

Subjects: WEATHER forecasting; NATURAL disaster warning systems; TORNADOES; OKLAHOMA; UNITED States. Weather Bureau; All Other Professional, Scientific, and Technical Services; MILLER, Robert; FAWBUSH, Ernie

Database: Academic Search Complete

Show all 5 images

Add to folder PDF Full Text (2.5MB)

Figure 1

- 2) Once you have selected the item you are interested in you can click on the “Folder” link near the top of the screen (Figure 2).

New Search Publications Subject Terms Cited References More

Searching: Academic Search Complete | Choose Databases »

weather in Select a Field (optional) Search Clear ?

AND hurricanes in Select a Field (optional)

AND in Select a Field (optional) Add Row

Basic Search | Advanced Search | Visual Search | Search History

DeVry University Library

Page: Previous 1 2 3 4 5 Next Date Descending Sort Page Options Alert / Save / Share >

Figure 2

- 3) In the “Folder Contents” Screen you make final decisions on which articles to keep and then print them out, email them, or save them as a file (Figure 3)- the export option is not currently supported by DeVry.

Articles
1-7 of 7 Page: 1

Name Sort ▾ Page Options ▾

Select / deselect all | Delete Items

1. Challenges to sustainability in the Caribbean karst.

By: Day, Mick. Geolog. Croatica, Jun2010, Vol. 63 Issue 2, p149-154, 6p, 1 Map; DOI: 10.4154/gc.2010.12

Karst landscapes in the Caribbean cover nearly 130,000km², more than half the total land area of the region. Approximately 90% of the karst is on the Greater Antilles, with other significant areas...

Subjects: KARST; DROUGHTS; FLOODS; WATER-supply; WEATHER; CARIBBEAN Area; Water Supply and Irrigation Systems

Database: Academic Search Complete

PDF Full Text (578KB)

2. Florida: Major Storm Season Is Forecast.

By: THE ASSOCIATED PRESS. New York Times, 5/28/2010, p13, 0p

The Atlantic hurricane season is likely to be a busy one that may spawn as many as 23 named tropical storms, including up to seven major hurricanes, the National Oceanic and Atmospheric Adminstr...

Subjects: WEATHER forecasting; STORMS; NATURAL disasters; HURRICANES; UNITED States; All Other Professional, Scientific, and Technical Services

Internet 100%

Figure 3

- 4) If you chose to save them as a file, you will need to click on the Tool Bar, select “Save As,” and then select where to save the information (Figure 4). If you chose to save results identifite, create an EBSCO account (Figure 5).

EBSCOhost - Windows Internet Explorer

File Edit View Favorites Tools Help

New Tab Ctr+T
New Window Ctr+N
Open... Ctr+O
Edit with Microsoft® XML Converter
Save
Save As... Ctr+S
Close Tab
Page Setup...
Print... Ctr+P
Print Preview...
Send
Import and Export...
Properties
Work Offline
Exit
Document Type: Article

New Search Publications Subject Terms Cited References More

Folder Contents Back To store these items in the folder for a future session, Sign In to My EBSCOhost.

Articles (7) Select / deselect all |

Images (0)

Figure 4

Figure 5

- 5) You will then be prompted to create your own username and password (Figure 6). This will allow you to access your saved search results from any computer with an internet connection. This is handy if you run out of time or have only a limited time to research.Unless you create your own account and save your search results there, the items you put in the folder will disappear upon logging out.

Sign In

Create a new Account | I forgot my password | I forgot my user name and password

User Name

Password

Login

With this account

- Save pre
- Organize
- Share yo

Figure 6

Appendix H: Comparison of Library Databases

Major DeVry Library Databases	Contents	Boolean	Phrase Searching	Truncation	Wildcard	Limiting by Date	Saving Search Results	Full-text
<i>EBSCOhost</i>	More than 35 different databases ranging from the general <i>Academic Search Complete</i> , to specialized ones, such as: <i>Business Source Complete</i> , <i>Medline</i> , and <i>Computers and Applied Science Complete</i> , among others.	AND OR NOT	"double quotation marks"	The * will search for the rest of a search term to the right. Bank* will retrieve banks, banker, bankers, banking, banked, Bankhead, etc.	The "?" wildcard replaces one letter and will find all variations of the word. Ne?t will find next, nest, neat. The # wildcard is used to look for spelling variations of a word mo#ld will find mold and mould.	Select dates from the "Search Options" menu or by using the slider bar	Results can be printed; emailed; downloaded; saved in a temporary folder or to a patron-created permanent folder	Most records are available in html and/or .pdf
<i>LexisNexis</i>	News, US Legal, International Legal, Companies, Countries, and People	AND OR AND NOT	Assumed—words are searched in the order they are entered	The * will search for the rest of a search term to the right.	The * replaces one letter and will find all variations of the word	Use the "Specify Date" drop down menu in the General Search mode.	Results can be printed, emailed, or downloaded.	All records are full text.
<i>ProQuest</i>	ABI Inform, Nursing and Allied Health Search	AND OR AND NOT	"double quotation marks"	The * will search for the rest of a search term to the right.	The ? replaces one letter and will find all variations of the word	Use the "Date range" dropdown menu	Results can be manipulated and printed, emailed, or downloaded from the "My Research" temporary folder.	Most records are available in html and/or .pdf

Appendix I “Database Discovery Project”

(Adopted from Burkhardt, MacDonald, & Rathemacher, 2003, pg 69)

Library database assigned:

Part 1 Database Overview

1. Who is the library database vendor (the company responsible for providing access to the library database)?
2. What organization is responsible for creating the library database(depending on your library database, this may be the same as the library database vendor)?
3. What subject areas or disciplines does this library database cover?
4. Who is the target audience for this library database (there may be more than one)? Explain your conclusion.
5. What types of materials are found in the library databases? Are there journal/trade/popular magazine articles, books, chapters, transcripts, reports, etc?
6. How many different sources does the library database index (roughly)?
7. What timeframe does the library database cover? Does it cover provide comprehensive coverage of the start date?
8. Are all the sources in English—if not, what other languages?
9. Are all the sources from the US—if not, from what other countries?
10. Does the library database provide the full-text or full image of the articles it indexes? If so, does it provide this for all the articles indexed?
 - a. If the full text/image is not available, what level of information is provided?
11. How often is the database updated?

Part 2 Library Database usability

1. Locate the library database’s help or user guide screens. How user-friendly are these? Are they easy to understand? What is the most helpful aspect? Least helpful?
2. Does the library database use a controlled vocabulary? If so, is there a thesaurus or list of subject terms? How easy is this to use?
3. What fields does the library database allow you to search (e.g. author, title, subject, etc)?
4. Does the library database offer an advance search feature? If so, what are its features?
5. In what ways can your search results be saved?
6. Overall, how easy is it to search this library database? Explain.

Appendix J

Interview Etiquette

- Throughout the process, be professional and courteous.
- Do your homework—know why you want to contact this specific person before contacting them
- Contact the individual first to let them know you are interested in interviewing them and why. Phone calls, email, or faxes are all acceptable way of initiating contact. You may not get a response to your first query.
- Learn all you can about this person and her/his field before interviewing them—you want to be sure to ask intelligent questions.
- Set an appointment which meets their schedule.
- Take a prepared list of questions—but feel free to ask follow ups
- Take careful notes—if you want to record the interview, ask permission first
- Avoid questions that require more than a “Yes” or “No” response
- Ask the who, what, where, when, why, and how questions
- Thank them for their time and send them a thank you note

Appendix K: “Time to Refine?”

You have been given the following research question:

“What are the religious beliefs of families who home school their children?”

Let's say you retrieved three articles.

(To actually read these, enter the Accession number into Academic Search Compete in EBSCOhost using the Accession Number Field to retrieve the records—Hint: copy the number provided for each citation. Use the dropdown menu, select AN Accession Number and paste the number in the search box.)

Citation A: 19453634

Citation B: J0E239916937508

Citation C: 31416481

Once you have read the articles, answer the following questions:

1. How well does each of the sources answer the research question?
2. Based on reading these, would you recommend the search be revised and continued or is there sufficient information to write a good paper? Explain your reasoning.
3. How might the search for each of the records be revised, if it needs to be? Provide examples of successful search strategies in answering this question.
4. Using the NoodleTools citation composer create APA citations for each of the three articles and submit them with your responses.