DATABASE SEARCHING ON INSPIRE

by Adele Hoskin

INTRODUCTION

Have you ever searched a database, received a set of answers that were OK but felt that more information was available if only you had the key? Many times a word or a phrase will produce interesting information but not exactly the information that is needed. Efficiently searching databases requires the separation of the search language and the database content. The purpose of this article is to discuss some searching skills to help separate the two and increase your precision. This paper will review basic searching, advanced searching , and some special features.

BASIC SEARCHING

INSPIRE offers several databases. The content of these databases covers all subjects for all audiences ranging from scholarly research journals to children's magazines. Once **INSPIRE** is opened, two interface choices appear. This article will discuss the **Ebscohost** interface. To produce a successful search, you will need to match your subject interest and intellectual level. Once you've decided on the database, the next step is to learn the search language. While each database has a specific subject and audience orientation, the search interface, the method of searching, is the same for all of the databases. When a database is opened, the **Basic Search** screen appears. Figure 1 shows the opening screen. There are three tabs: the green one, **Basic Search**, is the active window. The other tab, **Advanced Search**, provides more search options, and the third tab, **Choose Databases**, allows for switching databases.

BASIC SEARCHING

The most important step in searching is to read the help screens.

Figure 1

These help screens provide descriptions of the database structure, search language capabilities, and useful shortcuts. In this window, you can see three kinds of help links available. They are **Database Help, Help**, and **Search Tips**.

The first link – **Database Help** – describes the database content and scope; provides some simple searching tips; defines the fields in this database; and copyright usage. Use this information to verify that the audience level and subject matter is consistent with the information needed.

The system help or **Help** link in the upper right hand corner contains the instructions for searching using the Ebscohost search language. This information is database independent. All of this information applies to the Ebscohost search language regardless of the database. The information is organized for both browsing and searching. In the opening screen the information is organized in chapters that may be opened and read. There are tabs to activate both the index and the search mode. Also this **Help** has a glossary that defines the terms used within the program. A quick introduction to seaching Ebscohost is available under the subject **searching Ebscohost**.

The third help link is to **Search Tips**. This varies with the tab that is active – that is for basic searching it contains one set of instructions and for advanced searching, it contains advanced recommendations.

To begin searching, look at the **Database Help**. This page has information about the database itself, searching tips, searchable fields, definition of fields, and copyright and use information. The searching tips describe the use

of **Boolean** operators and **proximity** operators both independently and together. The information in the databases are organized into fields such as author name, title, journal name. In this help, the fields are defined as to the information contained as well as how best to search these fields. The next link to consult is **search tips**. The tips are a description of Boolean searching, Proximity searching, wildcards and truncation.

BOOLEAN SEARCHING

Boolean searching uses the operators **AND, OR, NOT**. These words are reserved terms for the system and have a specific meaning. Linking two words with the **AND** operator narrows the search. Each term must appear in the document. Using the operator, **OR**, broadens the search and either word must appear in the answer set. Using **NOT** narrows the search and requires that this term not be present anywhere.

For instance, for information about computers in libraries, type in the words **computers AND libraries**. The system would look for these words occurring in the same document. The system returns the number of answers or hits that satisfy the query and lists the first 10 hits in reverse date order (newest article first). This query will produce an answer set of about 7000 hits. This is a large answer set. A number of search strategies will be descsribed to obtain a more manageable answer set.

Taking a look at the answer set, it can be seen that this interface highlights the search terms. It is easy to see which terms were searched and why the answer was returned. In this case, the terms appear in the title of the article, the abstract, and the journal title. In fact, if you look at the database description in the searchable field section, you will see a statement that defines the default fields. That is, if you do not specify that you want your terms to be in a specific field, the system searches these fields.

The answer set provides information to make this a better search. First, look at the first citation to discover that while the search term was - **libraries** - the system also included library and library's as acceptable hits. More information about the handling of plurals is available in the **Help** screen. Also, the answer set is ordered by date – newest hit first, oldest hit last. The

ordering of the answers can by changed by changing **sort by** in the drop down menu. The answers can be sorted by date or relevance. A longer definition can be found in the system **Help** screen; however, for this overview, relevance is a computer program that counts frequency of occurrence of your search term.

PROXIMITY SEARCHING

Another option for improving your search precision is to use the **proximity** operators. These operators are explained in the Ebscohost **Help** link. To find this information, use the search option in the **Help** documentation and put in the term **proximity**.

Proximity searching describes the relationship between terms. The proximity operators are the **near** operator, **N**, where the words may appear in any order, and the **within** operator, **W**, where the words appear in the specific order. A number is used after the letter to determine the distance between the terms. In this example, using the Boolean operators causes the terms **computers** and **libraries** appear anywhere – that is, any number of words apart and in any order. With proximity, the terms can be searched within so many words of each other. Also, using the proximity operators puts the terms in the same field. **Computers n3 libraries** means the term computers and the term libraries are within three words of each other and in either order. **Computers w3 libraries** means these terms are three words apart and in that order. Consult the **Help** documentation under **Stop Words** to learn about how words are counted. Using the **near** operator is useful to find articles on concepts where the usage of the terms may be in any order. One example is breast cancer. Within the document, the author may write **breast cancer or cancer of the breast**. Using the **near** operator, **breast n3 cancer**, will search for both forms in one statement.

WILDCARDS AND TRUNCATION

Wildcards and truncation provide a means for searching when the exact spelling of the term is unknown. The **wildcard** (represented with a ?) is used for alternative spellings within the word such as color or colour. Instead of inputting both words, use the wildcard and only input colo?r. The truncation symbol is an asterisk * and is used at the end of the word to find plurals or alternative

Figure 2

endings. For instance, **hunt*** finds **hunts**, **hunting**, **hunter**, and **hunters**.

REFINE SEARCH

Under the search input box, is the refine search tab. This tab contains the limiters or expanders for your search. Searches can be limited by date (such as only the last two years), full text articles only, images, and peer reviews articles only. The expanders include searching within the full text of the articles, automatically **AND** the terms, and search system determined related terms.

To summarize, the **Basic Search** is an easy straight-forward search interface. Within the search box (labeled Find:), one term or several terms linked together with either Boolean operators or proximity operators or both can be entered and a relevant answer set will result. Using these operators, the expanders, and limiters will produce useful answer sets. However, to fine tune the search or to use the search again, the **Advanced Search** needs to be used.

ADVANCED SEARCHING

For more precise searching, look at the advanced searching screen in Fig 2. In this option, your terms may be designated to search specific fields. These fields are shown in the drop down menus. So **computers** and **libraries** may be limited to only the title, or only the abstract or to a subject heading. In this screen the **Refine Search** tab lists the limiters and expanders for this mode. In the Advanced Search mode, the **Refine Search** tab provides more specific options for expanding or limiting your search. Searches may be limited to a specific publication type, a specific document type, a specific number of pages, a cover story, or a publication date range.

SUBJECT SEARCHING

Subject terms or subject headings are words or phrases that are added to the document to describe the content. These terms are provided by a variety of sources. The sources of terms vary from author supplied terms to a hierarchical database of terms as the MeSH for the database, MEDLINE. The advantage of subject term searching using a controlled vocabulary is that the terms are applied consistently. The terms usually have a scope note that defines the term usage and also shows narrower and broader terms. Since some analysis of the document is involved, there is a time lag between publication of the document and the addition to the database. Full-text searching using keywords allows for the quicker dissemination of information but perhaps not as precise or consistent information is found.

Searching using subject terms varies by database. The subject term appears in the subtoolbar for both **Basic Search** and **Advanced Search**. However, to use the advanced features that includes the search history or setting up an alert, access the subject terms from the **Advanced Search**.

In Academic Search Elite, the subject terms button in the sub-toolbar returns a screen that allows you to browse for the appropriate heading. This database has a thesaurus that means that the subject terms used are related either in a hierarchy or simply a relationship of broader and narrower terms. This sub program has a **Search Tips** help screen that explains using a thesaurus in detail.

Figure 3 shows the results from this search. In this case, I browsed for terms that had **computer** and **library** in the heading and I chose the option, **relevancy ranked**. The other options are **Term Begins With** and **Term Contains**. I wanted relevancy ranked because that would return headings closest to the concept. The other options return the hits in alphabetical order. The answer set that is returned has some hyperlinked terms as well as cross references and two columns – **major concept** and **explode**. The link for **PUBLIC access computers in libraries** provides a
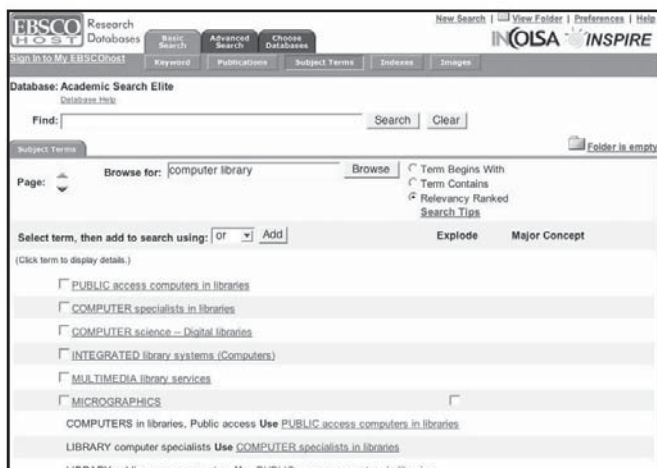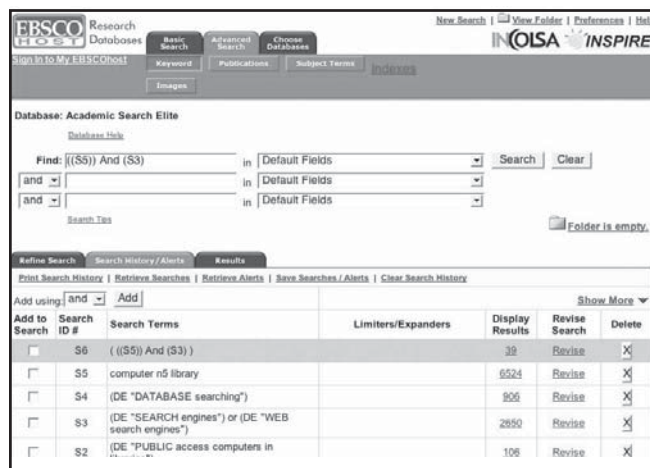

Figure 3

Figure 4

record that shows a scope note as well as the broader or narrower or related terms as determined by the database provider. Choosing the **Major concept** option means that concept represents the central idea of the reference. The **explode** feature searches the term listed and other narrower terms as defined in the thesaurus. To see the narrower terms, follow the hyperlinked heading. In this example, the term **micrographics** has the **explode** feature, so following the hyperlink we can see the narrower terms that would be in the search. If we elected to explode micrographics, all of the narrower terms would be searched as well as the term micrographics. The terms would be connected with the Booelan operator **OR**. Since **OR** broadens a search, this explode statement will return a large answer set. Adding other terms, or using some limiters as fulltext articles only, peer-reviewed journal articles, and graphic type can refine the answer set. A detailed explanation for searching a thesaurus is available in the system **Help** screen.

SEARCH HISTORY / ALERTS

In the Advanced search mode, there is another tab called **Search History / Alerts**. Figure 4 shows a search history which is a step by step recap of some search statements. Search statements can be reused without having to retype the entire statement again. Several search statements can be executed and then combine them into one big search. In this example, I looked for **search engines** in the thesaurus. I found two headings I liked and searched for them. I then looked for computer and library. This figure shows several search statements (s2,s3,s4,s5, s6). I can search S4 and S5 and return another dataset. This search statement (S6) has

only 98 hits. This search may be saved permanently or 24 hours. I need to set up a **My Ebscohost** account and name the search. I can retrieve this search statement and rerun several times. Instructions for setting up a My Ebscohost account is described in the **Save Searches / Alert link**.

One of the best new features added to **INSPIRE** is the ability to set up an alert. An alert is a search statement that is run against the updates to the database at regular intervals and the results are sent to you via email. This way a person can keep up-to-date about interesting subjects. The search statement created above, can be set up as an alert and the alert will send an email of the new references that satisfy the query as they are added to the database. This way, the computer works for you. The search statement can be very simple such as one term and every time information containing that term is added to the database, an email will be sent. Another alert that is handy is journal title. Figure 5 shows the screen to set up an alert for the journal Computers in libraries. Search for a favorite journal and then set up an alert. As each new issue of that journal is added to the database, you will receive an email listing the table of contents. More information about **Alert** specifics can be found in the system **Help**.

SPECIAL FEATURES

Within these 21 databases are several special features. Unfortunately, these are not listed in the system **Help**. Each database must be opened and surveyed. I have found several databases have a thesaurus. These are Medline, Academic Search Elite, Eric, Corporate Resourcenet, and Business Source Premier. The system **Help** describes in detail the mechanics for

Figure 5

searching a thesaurus. However, for MEDLINE, the Medical Subject headings structure and relationships need to be studied on the webpage: http://www.nlm.nih.gov/mesh/meshhome.html. The Medline database provided by INSPIRE is easy to use to find clinical medical information.

Another special feature is the ability to search images. If this feature is available, the image button will appear on the subtoolbar. Depending on the database the type of image will differ. Read the **database help** screen. Academic Search Elite, Topicsearch, MAS Ultra – school edition, Middle Search Plus, Primary Search, and Militay & Government Collection are the databases with images that are searchable.

The business databases, Business Source Premier, and Corporate ResourceNet contain company profiles. These profiles are lengthy analysis provided by Datamonitor. These profiles are lengthy articles summarizing all aspects of the organization.
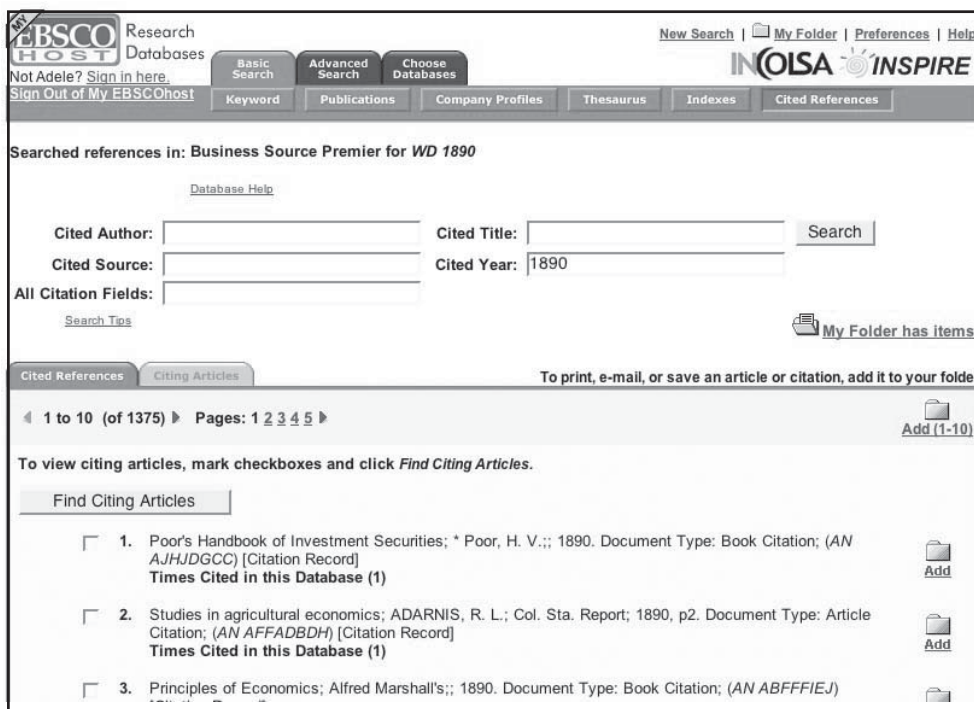

Figure 6

Figure 7

Another fun special feature is searching using cited references in Business Source Premier. This method of searching takes a reference and searches to find who cited that reference (used the reference in the footnote). The rationale for searching by footnotes is that if a specific paper is important, then other papers that cite the first paper would be of interest. If your information need requires tracking a citation, an alert can be set up and new references would be emailed.

Figure 6 shows the cited reference screen in Business Source Premier. The search options are cited author, cited title, cited source, and cited year. The cited means the information from the footnote. In this example, the cited year was 1890. The results shown here are the number of references or footnotes that are from the year 1890. The next step is to find the article that has the footnote.

Figure 7 shows the reference that has a footnote for an 1890 reference. Note that the citation also shows the number of references in the citation and for older references the number of times it is a footnote in the database. Again, detailed instructions are in the system **Help**.

CONCLUSION

INSPIRE is an exciting program. These 21 databases provide a wide range of information for different audiences. Within these databases are a variety of special features. The search program has both basic and advanced aspects. Information within these databases is reliable. This paper described the multiple searching capabilities and some of the special features. The take-away information is to read the Help screens and to remember that the computer cannot read your mind. With reviewing the Help screens and practice searching, the searches performed will produce excellent results and will be fun.

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