Successful Searching

Typical scenario: you need to find some information on a topic for a project – asap. A good place to start is the subject related databases on the TU Dublin Library website. So why use these as opposed to Google or other search engines? Subject databases index current and subject specific scholarly research published in thousands of academic journals and are the ideal way to find out what’s new in your subject. But how exactly are you going to use these resources? It is worth spending a little time thinking about this before you begin. This process is known as devising a search strategy and this guide is intended to help you plan one. A useful approach is as follows:

Define Your Topic & Choose Your Keywords

Now begin to decide on the keyword(s) or phrase(s) that sums up the information you want. Be as specific as possible. Use subject encyclopaedias and dictionaries to help you clarify your topic, get background information and give you ideas for keywords. You can use www.thesaurus.com or the thesaurus on the database you choose to get you started. Databases also suggest related subject terms or keywords to help save you time.
• Note synonyms and related terms e.g. rust/corrosion. counterfeit/fake
• Note varying terms e.g. lift/elevator, drugs/medication
• Note American spellings e.g. center/centre, tumor/tumour, organization/organisation
• Note any unusual plurals e.g. fish/fishes
• Note acronyms & abbreviations e.g. oLEDs, NMR, GC-MS, PCR

**Define the Scope of your Topic**

Think about the following issues:

• Do you want English language material only?
• Do you want material published within a certain time-scale e.g. the last 5 or 10 years or the current year only?
• Do you want to find a specific info type e.g. a standard or a patent or research article?

Decide which keywords or specific phrases are essential from the list you have prepared and start with these. It is not always necessary to use more than one or two keywords or phrases if your topic is specific in its own right or if you have obtained the main keywords from the database.

**Determine & Decide**

Now decide on the best resource or database most relevant to your subject. At the TU Dublin Library website click on **LibGuides**. Click on your subject link and you’ll find a list of subject related **Databases** and resources specific to your subject area. The most commonly used databases in Science are **Web of Science, Science Direct, SciFinder, IEEE Xplore** and **Academic Search Complete**.

**Search**

Input your search based on your strategy devised above. Once you have done your search you may find you have retrieved too many, too few or irrelevant references. This can get frustrating, but try the following hints to help you make your search work:

**Too many results?**

1. **Add keywords** to make your search more specific using **AND**.
2. **Exclude keywords** that are of no interest, normally by using **NOT** e.g. Pollution NOT air to exclude items on air pollution. Be careful - NOT can also eliminate relevant records e.g. an article on air pollution may also talk about pollution in general.

3. Try a **Phrase search** which allows you to find documents containing a particular phrase e.g. “ionization analysis” or “counterfeit drugs” or “analytical methods”

4. **Check your spelling.** You may have misspelled a word or used a US spelling variant.

5. Try the database Thesaurus for keywords you haven’t used before.

6. Use **NOT** to exclude irrelevant terms.

7. Limit by **Date** to exclude older publications

8. Limit by **Location** to narrow down your search to the relevant area.

**Too few results?**

1. Search for even more synonyms or related terms. In some databases you are given a list of appropriate keywords at the end of each reference which can give you further ideas.

2. Try to **truncate** words i.e. use a word root and find all words that begin with the letters you specify. Truncation symbol is usually * e.g. environ* would find environment, environmental, environmentalist etc.

3. If available, use a **wildcard** which searches for variable characters within a keyword. Wildcard symbols are normally ? or $ e.g. colo?r would find colour and color. Ditto tum?r and organi?ation etc.

**Search Tips:**

Try the **Snowballing** or **Linkage** database tools. Assuming you find at least one relevant journal article you can use that as a basis for future searches:

i) Look at the list of **References** at the end of the article to see what related research works the author has cited.

ii) Check what newer research articles have cited the article/authors by using any **Cited By** or **Times Cited** links listed with the original article. This will link you to newer research.

iii) Use the **Related Research** article links suggested by the database.
Discover Full-text

Some databases provide linked full-text journal access (Science Direct, IEEE Xplore and Academic Search Complete), but some do not. Search the TU Dublin Library e-Journals list to check if the journals you require are available. If the material you need is not in stock try another library such as TCD/UCD (a pass is available from the Library Desk) or apply for an Inter Library Loan document at the Library Desk.

Evaluate

Remember to evaluate your results in terms of currency, bias, accuracy and relevancy as well as author authority. See Library Guide No 6.

Tips

- Keep a record of successful search strategies to save you working it all out again the next time you want to update your search. Every database allows you to save your searches and re-use your search history.
- You can also opt-in to a dbase Alert which notifies you by email you when new research is published on your topic or a new issue of a key journal is published or a key article is cited.
- Databases will also cite their articles in a range of citation styles such as Harvard and APA. These can be exported to reference managers like Endnote or Mendeley or saved into your own MS Word Reference List.

Need Help

Remember to ask Library staff if you draw a blank, and outline the sources you have already used. It may just be that very little has yet been written on your topic. Contact the desk at 01-402-4894 or see the Subject Specific LibGuides on the TU Dublin Library Website.