

# Tips on Literature Searching

## Start early!

## Background reading

It's a very good idea to do some background reading before your search if the subject is unfamiliar to you; this will make you aware of the new ideas and vocabulary. It will make it easier for you when constructing search strategies for database searching.

## The search process

- Be prepared to use more than one search tool/database – e.g. don't use only ScienceDirect (only Elsevier journals). You may need to use a combination of databases to achieve optimum results
- Construct your search strategy – identify your key concepts and think of alternatives (e.g. synonyms, broader/narrower terms, singular/plural, UK/US spelling variations). Combine your search terms
- Look at your search results as to relevance – this will help you to decide how to adjust your search strategy (e.g. change, add, delete search terms) to remove irrelevant items whilst trying to retain the relevant ones
- Register with the database – this will allow you to save your useful search strategies (and come back later to rerun and adapt them) and/or save records
- Once registered you can also set up alerts to email you any new items matching your search strategy every time the database is updated

## Too many results from your database search?

Options:

- Add in extra search terms
- Limit by year/language
- Limit to title (some search terms)
- Limit to index terms (if available)

## Too few results from your database search?

Options:

- Alternative spellings
- Omit some of your search term (s)
- Search further back
- Try other databases
- Try citation searching

## The art of literature searching

Literature searching is not an exact science – two people looking for the same topics will have varying search strategies resulting in differing reference lists. But if you follow the leads (see below!) you should end up with a similar list of relevant resources for use in your assignment.

### Follow the leads

Your initial literature searches are just a starting point. Follow up on papers cited by the documents you initially find (earlier papers listed in the References section). They in turn will lead you to others. You can also use citation information in databases/Google Scholar to find later papers which have cited your document. As you progress you will find less and less new papers are turning up.

### Other strategies

Depending on your results there are a number of options to take your search forward; you may choose to use several of these approaches either simultaneously or consecutively:

- From the information you have gained so far you may want to rerun your database search, eg if you now have new/more precise terms (keywords) to describe what you are looking for **OR** you may wish to try a different database
- Citation searching, either backwards (reference lists at the end of papers) or forwards using search tools (e.g. Web of Science Core Collection, Scopus and Engineering Village, Google Scholar)
- Key papers. Often there is a “key paper” that started off a particular research area – try and identify it – hopefully it will become clear (i.e. most of the papers you are finding keep referring to it). Use citation searching to identify related papers
- Key authors – carry out author searches
- Look for general review/literature review type papers to help you. This should not be seen as a quick fix – use the paper/reference lists as a starting point
- Internet searching – this may provide a different sort of information eg company information, non-academic information, grey literature (e.g. non journal literature, report literature)

### Citing and referencing/Note taking

- As soon as you start extracting information and making notes from the papers, keep a record of their full bibliographic details. You might like to use reference management software to store and manage your reference details.
- Make it clear in your notes what information has come from what source (use page numbers as well), whether it is information you have paraphrased or if it is a direct quote. Also make it clear what are your own comments (these don't need to be acknowledged).