Where do I start? – Literature searching

Conducting a literature search
A literature search is a systematic search for information on a particular topic. It depends on the level you are at, the time you have and the size of project as to how comprehensive a literature search you conduct.

For an undergraduate dissertation, you will certainly look at books (reference books, textbooks and research monographs) and journal articles. If you are doing a PhD, then you will want to look at a wider range of sources: other theses to check if the research has been done before; conference papers for original research; possibly patents for technical information and eprints for pre-prints and post-prints. You may also need to look at statistical sources if you need facts and figures, newspapers for current issues and government publications.

Search order and search tools
Start by looking for background information on your topic. Carry out keyword searches on SUPrimo http://suprimo.lib.strath.ac.uk/ to find books. You may also want to search other Library catalogues or online bookshops such as Amazon. Read textbooks to get a basic overview and explanation of your topic. You can also get background information from encyclopaedias and web sites. Remember to evaluate what you find on websites.

Use SUPrimo (Articles + databases tab) to cross-search databases in a particular subject area or use individual abstracting and indexing databases to find journal articles. Start with the most recent articles (previous 5-10 years and work your way back. Review papers will summarise the topic and lead you on to other relevant articles. Journal articles and conference papers will be more specialised and up-to-date than books. Some databases (e.g. Medline) also include conference papers. There are databases that just contain conference papers, such as Conference Proceedings Citation Index Science and Social Science & Humanities (from Web of Science Core Collection) and Zetoc. The most recent information will appear in patents and research reports.

Sources
- Books
- Journals
- Journal articles
- Conference papers
- Newspapers
- Theses (PhD level)

Tools
- SUPrimo (Library collections tab) and other Library catalogues, bookshops
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- SUPrimo (Articles + databases tab), Databases: either multidisciplinary such as Web of Science or Scopus, or subject-specific such as Medline
- Databases: either broad databases or those that just contain conference papers
- Databases (Nexis)
- SUPrimo for Strathclyde theses, Databases (ETHOS, ProQuest Dissertations & Theses: UK and Ireland), eprint archives/repositories and websites for non-Strathclyde
- Patents
- Eprints and research reports
- Web sites

- Databases (e.g. esp@cenet and USPTO)
- Eprint archives/repositories, Google Scholar
- Search engines, subject gateways

See the following separate guides for more information on finding different types of material:

- Where do I start? - Finding books and journals
- Where do I start? - Finding journal articles
- Where do I start? - Finding information for my research project in Science.

Define your topic

Before you start searching, define your topic and the purpose of your research.

- what aspects of the topic are you interested in?
- what type of information do you want to look at (broad overview of the topic, experimental methods, case studies)?
- what time period (current or historical)?
- what geographical area?

It can be helpful to write down what you know already about the topic. This will help you identify gaps. Write down questions that you would like answered. You may want to produce a mind map, which is a visual tool that you use to map out your ideas on a topic using keywords.

You then need to form a search statement or statements from these questions that you will use to search databases.

Example topic

**How safe is the MMR vaccine?**

Break this topic down into concepts/main parts. Think of alternative terms to describe these concepts, any plurals – use truncation to find words beginning with a particular stem (denoted by an asterisk *), alternative spellings, any broader or narrower terms.

Safety (concept one)  
MMR vaccine (concept two)

**Alternative terms**

side-effect*  
immuniz(s)ation

adverse-reaction*  
measles mumps and rubella vaccine

autism

health problem*  
risk*

**Possible search statement:**

(mmr vaccine or measles mumps and rubella vaccine) and (safe* or risk* or adverse reaction)

Some databases (e.g. SciFinder and the basic search in Medline and Embase from Ovid) will allow you to express your search in natural language, so you could enter safety of the MMR vaccine.
Reviewing the Literature
As part of your dissertation or project you will be required to conduct a literature review.

A literature review is a critical and evaluative summary of previous research in a particular area. It should be organised in such a way as to provide a coherent overview. It isn’t just a descriptive list of the books and articles on a particular topic. You need to:

- bring out themes
- compare and contrast
- look at strengths and weaknesses of previous studies, including any flaws in data collection
- look at arguments for and against a particular view point
- identify gaps in knowledge and any flaws in data collection
- identify issues and controversies.
- relate the work you are doing to past studies

It is important to read the work yourself and not rely on a review of it. You may choose to organise your review chronologically or by theme. Be guided by your department as to layout and format. Some databases allow you to refine your results to literature reviews or you could use these terms in a search along with topic keywords to find examples from your subject area.

Further Help – Systematic Reviews
http://handbook.cochrane.org/ - a systematic review tries to identify, select, synthesise and appraise all information relevant to a research question. They are used in healthcare, but the methodology can be applied to other disciplines.

Even if you do not have to conduct an actual systematic review, following the steps for such a review can help with planning and conducting your literature review. See the Library’s Systematic Review guide for further help: http://guides.lib.strath.ac.uk/systematic

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