



How to Formulate Literature Searches: The Concept Map

Philson Library Information Services

The most productive searches are those where the information seeker has spent time working out a search strategy before actually using the databases and catalogues. A proper search strategy is critical to any database search and time spent on preparing it will result in effective and relevant information retrieval. Effective information collection depends on the design of a proper research and search strategy

- Select your topic and formulate your research question
- Identify and separate the main concepts in your question

Example of a concept map:

If you were interested in the impact of smoking on pregnant women and their babies

- you can state your topic as a question: ***What effect does smoking have on pregnancy outcome?***
- write it out as if it were an article to answer your question: ***The side effects of smoking during pregnancy***

Always identify and separate the concepts involved in a question:

side effects		smoking		pregnancy
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Beneath each concept list all keywords which describe that concept. Include all alternatives (synonyms, broader and narrower terms, acronyms, alternative spellings, singular and plural words). Consider using subject dictionaries e.g. handbooks, encyclopaedias, and reference sources to find keywords.

side effect/s		smoking		pregnancy
adverse effect/s		cigarette/s		pregnant women
risk/s		marijuana		fetus

When searching,

- terms listed vertically (alternatives) should be connected by **OR** to broaden each search concept
- terms between columns should be connected by **AND** to narrow the focus of the search

	AND		AND	
side effect/s		smoking		pregnancy
OR		OR		OR
adverse effect/s		cigarette/s		pregnant women
OR		OR		OR
risk/s		marijuana		fetus

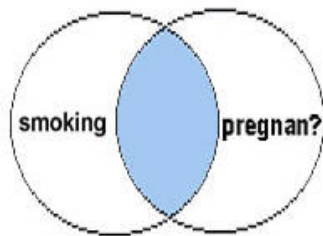
Keyword searching

- think of as many alternative words and phrases for the same search concept as possible
- use truncation to include plurals or variant endings of words. Truncation symbols vary for database to database. In Voyager the ? is the truncation symbol, e.g. adolescen? searches adolescent, adolescents, adolescence.
- use brackets around **or** statements if you are also using **and** in the same search e.g. (teen? **or** adolescen?) **and** pregnancy
- use quotation marks for phrases e.g. "drug abuse"

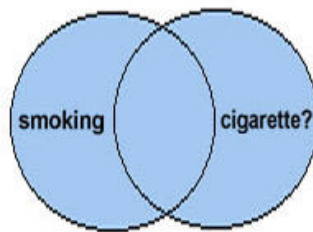
Boolean Operators **AND, OR, NOT**

- **AND** narrows a search by combination. Both terms must be present in the resulting references. It is used to combine all the concepts.
- **OR** broadens a search by inclusion. **At least one** of the two terms is present in the resulting references. It is used to include synonyms, related, broader and narrower terms describing the different concepts.
- **NOT** narrows a search by exclusion. It excludes any references containing the specified term.

The shaded area represents the retrieved material



AND



OR



NOT

If in doubt, talk to the Information Services Staff!

Jennifer on ext. 86126 or Sue on ext. 86123; Lorraine on ext. 86158; Stephanie on ext. 86132