**What is advanced literature searching?**

The literature search focuses on a single topic or research question which aims to cover all the available research relating to the question. It is conducted using one or more databases (usually three) and requires the use of appropriate search terms with synonyms, related terms etc. It also includes an audit trail (usually presented as a table) showing how you refined your results and arrived at your final articles.

If you are doing a research or dissertation module, a good starting point is to look at a good example of a literature search. You can link to example dissertations in the Advanced Literature Search Guide at [http://libguides.uos.ac.uk/AdvancedLiteratureSearchGuide](http://libguides.uos.ac.uk/AdvancedLiteratureSearchGuide)

**Step 1 - Background searching**

It is not good practice to start by choosing your articles from an initial Google or Summon search as it may then prove very difficult and time consuming to find the same articles via a database search which you will be required to do. It is recommended that you only use Summon or Google for preliminary searching to help you overview your topic prior to starting a more structured search.

**Step 2 - Consider your topic or research question**

- You do not need a fully developed research question before starting your search.
- You can start with a quick pre-search for a general topic, limit recent studies and look for themes you can explore in order to develop your topic into a question.

**Using PICO/PEO or another model to help formulate your research question**

- You may be required to use such a PICO, PEO or similar framework as part of your assessment.
- These models are used widely in nursing and health research to help you formulate an answerable question and to identify the key concepts within your question.
- **Tip!** You may not need search strings for each PICO/PEO statement as less well-defined outcomes (e.g. reduction in fever) can be difficult to conceptualise in the literature and may therefore be described in multiple ways.
- These models also help you to develop your inclusion and exclusion criteria.

**Step 3 - Develop your search terms**

- Using the right search terms to describe your key concepts is the key to successful searching and you may need to adapt and refine these as you go.
- Use synonyms (similar words), antonyms (opposite words), related words, acronyms, abbreviations and different terminology to improve your search. Using a thesaurus will help.
- Keep your search clean and lean - avoid using vague words and phrases like “the role of” or “the impact on” as these are not key concepts and are rarely helpful in searching.

**Step 4 - Select appropriate databases to search**

It is normally recommended that you search around three specialist nursing and health databases as these allow for more complex and structured searching than Google or Summon. Start with Cinahl and consider using general nursing databases (e.g. British Nursing Database and Nursing & Allied Health), Psychology Database for mental health topics and Medline for more medical topics.
Step 5 - Conduct your search using appropriate search techniques

- Search for your terms within the citation (the default option for Cinahl); however when using any Proquest databases you should switch from searching Anywhere to Anywhere except full-text to avoid returning too many irrelevant results.
- For best search results apply standard search techniques e.g. Boolean operators (AND, OR, NOT), truncation, proximity operators etc.
- **TIP!** Always use advanced search options as these facilitate more structured searching.

Step 6 - Refine your search results

- Check your results to ensure they are looking relevant. If not, tweak your search strategy e.g. try different search terms, check your use of Boolean operators or truncation etc. or re-run a key search string as title word search rather than in citation to focus the results more.
- If required, refine your results to primary research articles by searching for the word study and combining these results with those from your topic search.
- Refine further by applying any limit options or other expert filters offered by the database e.g. date, peer-reviewed/ scholarly journals, publication (journal) title, English language etc.
- **TIP!** Do not refine by full-text or by geography.
- Your final number of search results will depend on your topic although you should aim to end up with no more than around 80 articles.

Step 7- Evaluating your search results and making your final selection

Now check your results for titles which look relevant and exclude those which are not. Mapping back to your PEO and PICO statements will help with this

- Check that the population or setting is a correct match e.g. exclude papers relating to children if your population is adults.
- Is the intervention or exposure a close enough match?
- Are the outcomes as stated? Would papers with opposite outcomes be useful to include for comparison e.g. papers about the failure rather than success of a treatment or service.

If your instinct tells you that a paper is not relevant ask yourself why. The “why” then becomes an exclusion criterion.

Step 8 - Presenting your search results

- It is good practice to document your search results in a table showing your search terms, the number of results for each database, and any search limits and filters used. This is an audit trail, showing that your search is transparent and replicable by anyone reading your work.

Step 9 - Finding full-text

- If full-text is not available look for DOI links (Cinahl) and 360 links (Proquest databases).
- Cut and paste article titles into Summon or Google to find full-text.
- If all else fails you can request articles (5 for L5 students, 10 for L6 students).

For more support with literature searching use the **Advanced Literature Search Guide** at [http://libguides.uos.ac.uk/AdvancedLiteratureSearchGuide](http://libguides.uos.ac.uk/AdvancedLiteratureSearchGuide)