Advanced Searching III: Conducting a ‘systematic’ search

What does ‘systematic’ mean?
If you have been asked to be systematic in your searching, this simply means that you need to take a more structured and consistent approach to searching the literature. You may hear the term ‘systematic review’: this is a literature review where the approach to finding and analysing the literature are highly systematic.

Here are some key features of a systematic review:

- **Methods are clearly stated**, so that the review could be repeated by someone else.
- An attempt is made to find **all of the literature** relating to the research question.
- It is clear what is **included or excluded**, and why.
- Materials are **presented systematically** (e.g. according to theme/date).
- Conclusions are drawn about the **strengths, weaknesses and gaps** in the literature on the topic.

What steps should I take to be systematic?
Here are the main stages of a systematic search. The main Library Guide to your Literature Search and Review covers literature searching in more depth. If you have been asked to conduct a full-scale systematic review, there are many good books which describe the process in much greater detail.

1. **Decide where you are going to search.**
   You will need to include multiple databases (check your Subject Guide for ideas) and may also want to search sources of reports and unpublished literature. Record your decisions.

2. **Decide which keywords you will need to use.**
   Make a table or mind map of the key ideas you want to search for, and a range of potential keywords to describe them. Record your decisions.

3. **Identify other criteria.**
   Are you using any other restrictions, e.g. limited dates or geographical locations? Will you be looking at reference lists in the materials you find to locate further materials? Record your decisions.

4. **Test your keywords.**
   Different keywords may work well in different search locations. You may identify further keywords as you read your results, and you may want to try using subject terms or citation searching too.¹ Record which searches you have used.

¹ See Advanced Searching Guides I and II on Subject and Citation Searching for further details.
5. **Produce a detailed description of your ‘search strategy’**.
   Your search strategy is the combination of the information you recorded in the steps above. A summary of your search strategy is usually included in the main part of your research project, and fuller details in an appendix.

**How can I search systematically and quickly?**

Instead of running a different search for every combination of keywords in every database, you can build up complex searches covering all your keywords. You may want to use advanced search pages or add additional search boxes to help you structure your search.

Here is an example of an advanced search, using structured search boxes:

```
<table>
<thead>
<tr>
<th>Search:</th>
<th>Choose Databases</th>
</tr>
</thead>
<tbody>
<tr>
<td>health OR well-being</td>
<td>in Select a Field (optional)</td>
</tr>
<tr>
<td>AND</td>
<td>Depression OR anxiety</td>
</tr>
<tr>
<td>AND</td>
<td>work OR employment OR job</td>
</tr>
</tbody>
</table>
```

- Putting a single concept on each row, and linking those rows with **AND**, means that each concept should appear in every search result found.
- Putting different keywords describing the same concept within the row, and linking those keywords with **OR**, means that the database doesn’t mind which keyword is used to describe that concept: it will select documents containing either.

To save yourself even more time you can use brackets to build up this kind of complex search in a single search box, and then copy and paste your search between databases. The example above would be written

\[(health \ OR \ well-being) \ AND \ (depression \ OR \ anxiety) \ AND \ (work \ OR \ employment \ OR \ job)\]

Using similar searches across different databases and search locations makes describing your search strategy much easier, as you can simply describe where and how you deviated from your most common search approach.

**References**
