Visualize your research with concept mapping

There are several reasons why you might want to invest in learning to concept map.

1. **Explore a subject area**
   - It can help you at the beginning of your studies to explore what is out there in your field. For example, you can map the main ideas from a review article or a key paper. The concepts can then be used in the design of a search strategy.

2. **Gain insight into your research**
   - Next, it can help you gain insight or perspective. Mapping will organize your ideas, documents, and important sources of information.

3. **Show off your work**
   - You can also present your research project as a concept map that everyone can understand. It can be shared as a website that links out to articles, webpages, videos and other media.

Now, let's get going with four basic steps to building a concept map.
First of all, every good map responds to a focus or research question. The focus question spells out the problem that we are working on. We might have the question:

**How does pharmacist care impact cardiovascular disease risk factors in outpatients?**

Step number 2 is to choose concepts that describe the objects or events involved. On average, we would try to come up with 15 to 25 concepts that are important for answering the question.
We already have broad concepts in the question. The focus is on pharmacists care, cardiovascular disease, or CVD risk factors, and outpatients but we will need to brainstorm additional concepts. It's okay if there are not as many as 15 in the beginning.

Step 3 is to arrange the concepts hierarchically, from general to specific.

The map is taking shape.
The last step is to connect concepts with words or phrases to define the relationships. This is actually the most difficult part of concept mapping. Concepts on their own are not as meaningful and don't demonstrate understanding, unless we describe how they are related.

Back to the map in progress. It's important to be as brief as possible when connecting concepts.
The concepts and linking words will form propositions, or statements, so that the map can be read at any point.

As we learn more about the subject by reading papers and visiting websites, new concepts will be added to the map. If we identify areas of the map that need more investigation, we can use concepts as keywords to search Google Scholar and subject specific databases.
You can make a concept map with pen and paper, or by moving around post-it notes with concepts written on them. However, there are programs that provide more options. For example, documents and links to websites can be added directly to concepts using a software, such as [CmapTools](https://cmap.ihmc.us/). Styles can also be refined afterwards to make it more visually appealing.

Every map is a work in progress, so it is important to share it with others and reflect on the content. You can even help the matter along by providing guiding questions for feedback such as:
Now it is your turn to practice the steps. How would you describe your research or specific topic area for a course?

You are welcome to make an appointment to come by for help one-on-one.

We look forward to seeing your maps!

April Colosimo (april.colosimo@mcgill.ca)
Associate Librarian, McGill University
Schulich Library of Physical Sciences, Life Sciences, and Engineering