# 2.1 Using books in your research

Talking Head

Imagine you’ve just received an assignment. You’ve been presented with a problem related to air pollution. You need to understand the problem and design a solution. But maybe you don’t have a solid understanding of air pollution yet, and you need to learn more before you start brainstorming solutions. Where can you start? This is a situation where books can be useful. They can provide you with a wealth of useful background information to help you start to better understand a problem or a topic. Plus, most libraries offer books in print and online, so you can find books in the format you prefer. But, what kind of book do you need, and how should you approach finding one?

Voiceover

Let’s start by considering two different types of books – scholarly books and popular books.

[show Scholarly books attributes on left side of screen, then show Popular books on right side]

Scholarly books:

* Are written by experts in the topic
* Are intended to inform other researchers and scholars of recent research
* Contain technical language and terms that are discipline-specific
* Cite sources and provide reference lists

By comparison, popular books:

* Are typically written by journalists
* Are intended to inform, persuade, or entertain a general audience
* Use everyday language and not a lot of technical language
* May not cite sources or provide reference lists

[show Clearing the Air cover and then first paragraph from Chapter 1 (<https://www.amazon.ca/Clearing-Air-Beginning-End-Pollution/dp/1472953312>)]

An example of a popular book on air pollution is *Clearing the air: The beginning and end of air pollution* by journalist Tim Smedley. If we examine just the first paragraph of the first chapter of this book, we can see it is written with a very informal tone without a lot of technical language, so it’s easy to understand. This is typical for popular books.

[show *Air pollution, climate and health* cover and then first paragraph from Chapter 1 (<https://discovery.mcmaster.ca/iii/encore/record/C__Rb5040693?lang=eng>)]

An example of a scholarly book on this topic is *Air pollution, climate and health: An integrated perspective on their interactions* edited by Meng Gao, Zifa Wang, and Gregory Carmichael, each of whom is a university professor in science or engineering, with contributions from many other researchers. If we look at the first paragraph of the first chapter of this book, we can see that compared to *Clearing the Air*, ittakes a much more formal tone and uses more technical language and the information presented is much denser.

In your academic work, you will want to focus on scholarly books, which can provide reliable information from authoritative, scholarly authors. Scholarly books are a great source of background information on your topic and will be easier to understand and learn from compared to something like a scholarly journal article. Compared to articles, books will provide you with a broader understanding of your topic and more context.

It’s important to recognize that when you consult a book, you don’t have to read the whole thing. As we’ve seen, scholarly books can be long and dense, and so you can consult the sections that are most relevant to you. Use the table of contents to help you identify the parts that are relevant, and skim or skip sections that you don’t think will be as useful.

One more useful type of book is a reference book. A reference book is a book that you consult to quickly find facts or other pieces of information, rather than reading an entire section or an entire book. Some common types of reference books are things like dictionaries, encyclopedias, and handbooks. You might use them to look up things like definitions, numeric constants, or properties of materials. An example is *Perry’s Chemical Engineers’ Handbook* which you can refer to for all kinds of information used by chemical engineers.

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Now that you’ve learned about scholarly books and reference books, you are ready to start using them. They are a great source for the early stages of your research process and should not be overlooked!

# 2.2 Finding books

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If you know that you need to find some books on your topic, how can you go about finding them? We’ll discuss two strategies: the library catalogue and eBook collections.

Voice Over

*Library catalogue*

First, you can use the library catalogue. Go to the library website and from the Search tab click “Catalogue”. This will search for books owned by the library either as print books or eBooks, as well as some other materials. You can search by author, title, or keyword.

If you wanted to find the book *Air pollution, climate and health: an integrated perspective on their interactions*, you could search for it using the first few words of its title. [show search for *Air pollution, climate and health*]. The first result is the one that we are looking for. We can click the book’s title for more information, and then click “Access this resource” to view the book online.

You can also search by topic. [search catalogue for air pollution] For example, we could search for air pollution. Now, we can limit our results to e-books, print books, or both, using the filters on the left side of the screen. We’ll search just for print books on this topic. In this case, you can see which library the book is located in and the book’s call number, which you can use to locate it in the library.

*eBook Collections*

The other strategy that you might try is searching in an eBook collection. Libraries purchase collections of eBooks that you can access and search. Some of the eBook collections in engineering at McMaster include [display list]:

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Whether you’re searching in the library catalogue or in an eBook collection, you’re ready to start finding high quality scholarly books to help you better understand your research topic.