

How to Read Scientific Papers Quickly & Efficiently



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Note1: Having access to a university library makes all of this possible (for me). They have access to all the scientific literature on a nice easy to use search engine. If you are a university student then I suggest you take advantage and start reading up on the topics that interest you.

With out the university library system I could not do this nearly as quickly because of all the pain involved in subscribing to publications, downloading paper PDFs, illegally downloading papers, or actually buying them...

Note2: The illegally downloading thing is pretty new and, to be honest, it's great. Go check out 'Sci-Hub'.

If you are someone who does not have access to the most recent scientific literature through your university institution, or is uncomfortable with illegal downloads, then I suggest you check out Google Scholar.

How to read a scientific paper quickly & efficiently

1. Skim the abstract

Skimming the abstract first will allow you to get somewhat familiar with the topic at hand. However at this point it's unnecessary to read through the methodology, data, or most of the other information included in the abstract. What you should read here is the reason for the study, find out *why* they felt the need to do this research in the first place and then you can determine if reading further will be worth your time.

There are millions of scientific papers. You do not have the time, the inclination, the brainpower, or any ability to read them all, so don't bother trying. What ever topic you are perusing will probably have a substantial amount of research around it, and if it doesn't then it probably will soon. Such is science.

2. Read the conclusion

The conclusion of the paper is generally found at the bottom (no shit Drew) and it summarizes what just happened.

The conclusion is relevant if you wish to understand wtf just happened.

3. after the conclusion, read the results

The conclusion will give you insight into what the results mean so read it first otherwise the results will likely mean nothing to you.

4. read the methods section

If you are sure the results and conclusion are relevant to your topic of inquiry, then you should read the methods section and dive into how the results were actually found.

If you are not a scientist then much of this methodology will be irrelevant, but by reading it you will get a big-picture sense of the type of research being done (eg; a group of lab rats were fed gluten free yogurt while another group were fed yogurt containing gluten).

If you are a scientist then you will be looking much deeper into the exact research methodology, and, being a scientist, you will probably be looking to either replicate their methods or to poke holes in it and do it differently. Such is science.

5. start this process over again with a different paper

At the bottom of your paper there will be a number (often lots of numbers) of reference papers.

Science is largely built on references so if you have a paper that has zero references then it's probably not a scientific paper...

Find the references that are relevant to your query then go forth and do this process over again.

Reading a scientific paper should be a quick task granted you have access to it.

Understand that most of the papers you will encounter have absolutely nothing to offer you and your specific query, so its important to move through them fast otherwise you will waste a lot (an awful lot) of time reading things which are interesting but not relevant - this can be fun, but it can also be tedious if you are trying to learn about something specific under a deadline. Blast through them quickly and you will have time to comb through the relevant papers later.