How to Access Reliable Science Research

Curiosity about the research process and potential interest in pursuing a career in research drive students to try and find research articles, but they often don't know where to find them, or get blocked by paywalls. This guide is here to help you explore research related to your interests.

Reliable Science Research: Peer Review

Before we get into the list there is something we should clarify: what do we mean by reliable science research? Research articles published in scholarly journals are considered reliable because they are peer-reviewed before they are published. When an article is peer reviewed it means that other experts in that field have reviewed the quality of the research and the methods used to conduct it. Researchers who want their article published will document their procedures and admit any limitations to their research. This ensures that research articles that contain obvious mistakes in their research that heavily distort the results will not be published. A properly peer reviewed article will add to the pool of knowledge it was researching and guide the path for future research in that area. There are, however, journals that commit what is called 'predatory publishing', which is when publishers mislead both researchers and the public by publishing articles without review or editing by qualified researchers or even at all. In the further reading section I have included a link to a list of journals suspected of predatory publishing.

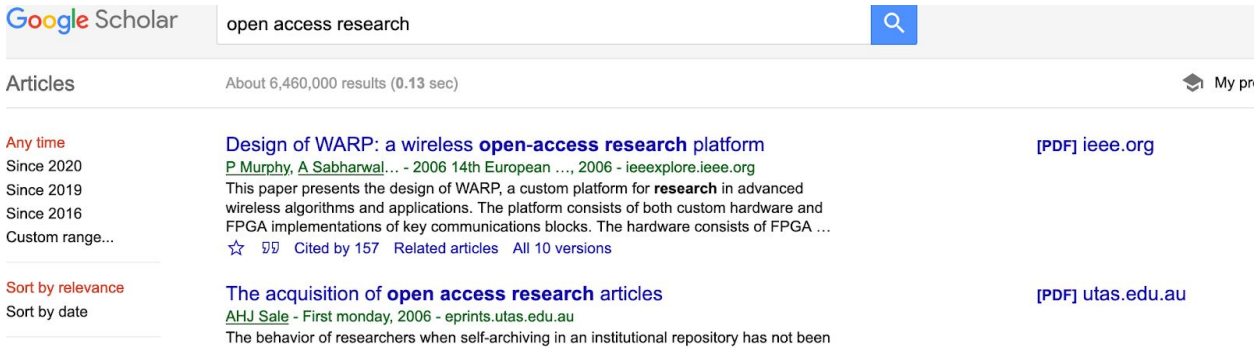
Conflict of Interest

Another potential threat to the reliability of research articles is conflict of interest, which is when one or more of the scientists conducting the research has personal or financial considerations that could interfere with their ability to conduct or report the research done in an honest manner. For example: imagine a clinical research about a nutritional supplement's effects on health. There could be a conflict of interest if the research was being heavily funded by the company that sells that supplement, or a member of the research team was a member of the company that sells it, or published in a journal funded by the company that sells it. These conflicts have to be stated by the researchers when they are applying for grants to conduct research, and there is often a statement in individual articles declaring the presence or absence of conflicts of interest. If research results sound too good to be true, it doesn't hurt to try and see if undisclosed conflicts are present. If there is a potential conflict of interest in a research article, it will be helpful to try and find other articles without the conflict of interest and see if the results are in line with each other.

Searching For Research

So where do you start trying to find research articles? An easy option is to use **Google Scholar**. This is like regular google, but instead of searching the whole internet it searches only for

scholarly articles and books. It has a sidebar for narrowing things down by date on the left and a column on the right that sometimes contains links that lead directly to PDFs of the article (image below).



Otherwise it will give you links to websites where you may be able to freely read the article, although some websites will not let you read their articles for free.

Some reputable publishers that are open access, which means you can read the articles there for free, include **Public Library of Science (PLOS), Elsevier's Open Access Journals**, and other journals listed on the next link in the further reading section.

Some research articles are not available to read for free at the main publishing site but there are still copies elsewhere that can be viewed freely. Browser extensions such as **Unpaywall** can help redirect to those copies more quickly, and Unpaywall is one of the free ones. Another option for finding articles is through public libraries.

Public libraries can give students access to many different databases spanning countless subjects that can be accessed through a library card.

Further Reading:

List of dubious journals compiled by librarian and associate professor Jeffrey Beall:
https://scholarlyoa.com/publishers/

List of reputable open access journals:
https://guides.lib.jjay.cuny.edu/c.php?g=399417&p=3262493