

Optimizing Your Article for Discovery

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We all want our published work easily discoverable online, and often researchers choose journals based on their audience and coverage for that reason. Beyond your choice of journal, there are proactive steps to ensure your article is discoverable once it's been published. Regardless of how your article is made available online, it will need to be indexed by a search engine in order to be discoverable. There are many search engines to consider, such as those behind Google Scholar, PubMed, Web of Science, and Scopus. Optimizing your article for whichever search engine it encounters is the best way to make sure it can be easily found when searching your topical area.

The tips on optimization listed below are meant to help search engines better understand the contents of your article. Keep in mind this isn't a comprehensive or exact list because search engines look at fields (i.e. title, abstract, author keywords, body of the text, tables and figures, etc.) differently depending on their specific algorithm.

Choose your words carefully

Choosing key terms for your title and abstract is incredibly important. Some search engines don't index the full body of your text, leaving the basis for discoverability solely on the title, abstract, and keywords. Remember that the terms you use should reflect pathways in which searchers might come across your article. Additionally these words can impact where your article appears in search results. Generally, the more frequently a search term is used in your article (though hopefully not frequently enough to annoy your readers), the more relevant the article is considered in the search results.

Optimizing an article with dozens of key terms isn't possible, so choose carefully a few important words. Consider using words from controlled vocabularies such as PubMed's [Medical Subject Headings \(MeSH\)](#), [CINAHL's Subject Headings](#), or [Embase's Emtree](#). These lists contain the main terms used when indexing biomedical literature. Also consider using [Google Trends](#) to learn how people have recently queried a specific topic in Google's search engine.

Use synonyms

If possible, use synonymous words or phrases in the abstract and body of your text based on your chosen key terms. Most search engines are unable to recognize and translate synonymous phrases, unless the database has a sophisticated controlled vocabulary. For example, a search for "inborn genetic disease" in many databases won't also search for "single-gene defect" though the two phrases could be considered synonymous.

Clear and descriptive titles

Well-constructed titles are those that clearly describe the topic of your work. They reiterate important phrases or words from the abstract. They are neither short (i.e. one or two words), nor are they very long (i.e. run-on sentence length). Generally, if a search term is found in an article's title (rather than the abstract, keywords or body of the text), the article is considered more relevant in the search results.

Figures and Tables as machine readable

Generally, the text contained in figures and tables is only indexed if it is considered "real text" or found within a vector graphic (such as a *.svg, *.ai, *.eps, *.pdf file formats). The text in raster graphics (such as *.bmp, *.png, *.jpg, *.tif, *.gif files formats) is not indexed because it is considered part of the image. If your publisher requires the raster file format, consider seeking permission to submit figures and tables to [Figshare](#), which provides metadata tags so they can be indexed by Google Scholar and Thomson Reuter's Data Citation Index.

Citations count

Search engines such as Google Scholar consider citation count very heavily in their relevance rankings. This emphasizes how important it is for authors to cite articles that have influenced their work. To keep things in perspective, while many search engines take citation counts into consideration, they also employ other more balanced measures. PubMed, for example, weights factors such as how many times and in what fields search terms are found, and how recently an article was published.

Optimizing after publishing

If you've already published with a less-than-optimal title, abstract, or keyword list, there are options for mending the issue. The library offers [DigitalHub](#) a repository for Northwestern Medicine's scholarly outputs. After checking your publisher's copyright policies, consider uploading your article to DigitalHub. You can enhance your article by adding a well-optimized description and new keywords. DigitalHub is crawled by Google, so your scholarly outputs will be more discoverable and better accessible for searchers.

In the end, search engines make optimization a moving target as algorithms change and factors are weighted differently. Even though there is no perfect formula for optimization in all search engines, the options listed here will help search engines better understand your article.

Want to learn more?

For more tips and tricks, join us for [Enhancing the Impact of Your Research](#), a one-hour introductory class by Galter Health Sciences Library. Participants will learn practical strategies on establishing an online presence, enhancing the discovery and dissemination of scholarly outputs, and communicating the impact of their research.

References

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