Tips for Writing an Abstract

The abstract is a critical part of a scientific paper; in fact, it may be the *only* part people read. Yet, many authors write their abstracts at the last moment, without really thinking through what the abstract should include. So what should it include, and how do you write it so that it compels people to read your paper, or attend your talk or poster? Here are some tips.

State your problem. If readers don't grasp the problem, they're not going to care about the solution (i.e., your research) or get the significance of what you've found. So, the beginning of the abstract should contain a statement about the research problem or question, along with enough background or context for readers to understand why the problem is important. Your findings should then be presented as an answer to the question.

Have a main point. Although the style of writing is different, the abstract is like a brief news item on your research, and news stories always have a main point. So, rather than trying to squeeze in as many findings as possible, write a few bullet points or "sound bites" about your most important data and then shape the abstract around them. This is also useful to do before writing a full-blown paper.

Target a broad audience. The abstract should be aimed at a wider audience than the paper itself, because you never know who will come across it online and in database searches. Thus, it should contain few, if any, jargon terms or acronyms; a statement of the research problem; and adequate background information for scientists outside your field. This becomes even more important when you're publishing in widely read journals, such as *PNAS*.

Say what you found, not what you did. Statements about methods (we did this) can almost always be rephrased as statements about findings (we found this). It's always more interesting to hear about results than methods, plus you'll save on words.

Be explicit about the significance of the research. If you want to compel people to read your paper, don't make them guess what you think the data mean. A good abstract includes a statement at the end about the significance of the work, the more specific the better.

Eliminate writing errors. When people are skimming text very quickly—as they are with abstracts—they are less patient with writing errors and clunky, hard-to-read prose. So, make every effort to use good grammar, proper sentence structure, transitions between sentences, and so on. Reading your abstract should be as effortless as strolling a gently winding path. Making readers hack through thickets of words will discourage them from taking the longer journey—reading your paper.

Choose keywords carefully. Learning how to choose good keywords (ones that increase your paper's chance of being found in searches) is beyond the scope of this workshop. But make sure you discuss this with your advisor, your college librarian, or others who can offer guidance.

In summary. To write an informative and interesting abstract: 1) State the problem; 2) Present only your key findings (i.e., the main points), making explicit how they address the problem; 3) State the overall significance of the research; 4) Provide background as needed; and 5) Make your writing as clear and accessible as possible.

Workshop: Writing an Abstract for a Paper, Talk, or Poster
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