

Scientific papers: Tips for writing a good abstract

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The abstract isn't just a collection of strung-together sentences from the introduction, methods, results and discussion. Instead, it needs to be greater than the sum of those parts, an *argument* that compels people to read your paper, attend your talk, or visit your poster. Easier said than done, right? Here are a few tips to guide you in writing an informative and compelling abstract.

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 the research problem, along with just enough background for readers to understand why it is an "intricate unsettled question," a "source of perplexity." Your findings should then be presented as a solution to the problem.

Have a main point. Although the style of writing is different, the abstract is sort of 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 can be a good thing to do even before you start writing your paper, as it can help you find your overall focus.

Target a broad audience. The abstract should be aimed at a wider audience than the paper itself, because you never know who's going to pull up your abstract in online and database searches. Thus, it should contain few, if any, jargon terms or acronyms, and include adequate background information for scientists outside your field (this becomes more important, of course, when you're publishing in widely read journals, such as PNAS). Having a main point will also help capture the attention of a broader audience.

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 your data mean. A good abstract always 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, of course, with abstracts – they tend to be even less patient than usual with writing errors and clunky, hard-to-decipher prose. So, make every effort to use good grammar, proper sentence structure and so on. Your abstract should carry readers along like a gently winding path. Making them hack through thickets of prose, on the other hand, will discourage them from taking the longer journey (i.e., reading your paper).

To summarize. To write an informative and interesting abstract: 1) State the problem; 2) Present your key findings (i.e., the main point), answering as you do how they address the problem; 3) State the overall significance of the research; 4) Provide background as needed, and make your writing as clear and accessible as possible.

