

# Ask yourself

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Some stare at the ceiling; some outline; some wait until the last minute . . . Whatever your approach to writing, before you strangle your pen or accost your keyboard, consider a helpful suggestion: Ask yourself some questions. The answers will help you focus, track, and stay in tune with your readers.

First, why did you do this work? This may seem obvious, but it is not (as a matter of fact, it should always be part of a paper to briefly explain what motivated it.) Because a supervisor told me or because I could get funding are not acceptable answers. There must be a reason: a problem, a misconception, a weakness, something that warranted spending resources and gives your work real value. Identifying the reason for writing is the first step, but there is more you need to answer. What about your readers? Your work may be good, but is it useful to others—i.e., is it worth broadcasting? Because you've worked so hard, this may be difficult to answer honestly, but remember that others judge your work by its quality, originality, and utility.

Next, ask yourself who you expect to read your paper? Will it be only high-level experts, like yourself? Could it be scientists or engineers who are only acquainted with this type of work? Technicians and operators? Managers . . . at what level? Do you want your paper to influence decision-makers; people who decide strategies, directions, and when to open the purses? How about people outside your discipline, outside the geosciences? Does this work have applications to attract them? How will you tailor your writing to include unexpected readers? Identifying and targeting your audience is critical to having your work appreciated and used. Remember, unexpected readers include students or people who are trying to learn about your work.

Once you've defined the motivation and the audience, focus on action, specifically your readers' action after finishing your article. Do you hope that your readers will change their minds about a concept . . . abandon a method in favor of yours . . . change the strategy on a project? For example, if you developed a new computer algorithm, do you expect your readers to invest the days and the resources to verify, validate, learn, and invoke it to save a few seconds or minutes of computer time? Is that reasonable?

What you seek to know is the value of your work to the reader. If you feel, like most writers, that your work is highly valuable then you have to persuade your readers. If you feel that, "The science will sell itself," you may be in for a big

disappointment. Journals are littered with scientifically sound, but totally forgettable articles only their writers valued. Judge your work as if authored by someone else.

Let's say that you have reasonable expectations of reader reaction. Now you must determine how you will persuade others to go beyond reading and realize your expectations. Ask yourself what persuades you as a reader. Identify what piques your interest and use similar tactics to persuade others.

At this point in your preparations you're probably anxious to start writing. Well, hold on and ask a couple more questions.

If you've done theoretical or modeling work, how much theory should you include? All that you sweated through? To be blunt, reading detailed theory is boring! Most readers won't do it even though the theory is necessary for verifying and repeating the work. Readers are interested in results and benefits. Put the details in an appendix. An appendix is for those who like to or must slog through triple integrals, quadruple-subscripted tensors, etc. In your main text tersely summarize the needed results to maintain continuity and reference the appendix. Then everyone will be happy—the readers because the text is readable and you because you show your hard work.

If your text is more practical, you still have to ask yourself how much detail you should give and how much readers can tolerate. If you decide that there is quite a bit of detail required to verify, validate, and reproduce your work, then, again, use appendices. Most of us would rather read an interesting, informative five-page article and scan a 10-page appendix than slog through all the details of a tedious 15-pager.

Finally, ask yourself what are the key points of this work. Everything you did is not a key point! Be very selective. Word your writing to highlight the key points, and make sure the highlights are obvious to your readers.

Well, that's my list. If you answer these questions and keep mindful of the answers while you write, you can create a better document than you would otherwise. Be honest with your answers and don't skimp. A friend told me that in projects that build on sequential stages, if you skimp during the early stages, you cannot cover up shoddy work in the later stages. Writing is no exception. ■

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