

# TRANSLATING YOUR SCIENTIFIC WRITING FOR A PUBLIC AUDIENCE

Whether you are competing in a Three Minute Thesis (3MT) competition or hoping to secure essential grant money for your next project, learning how to communicate your scientific research to the masses is a crucial skill that will allow you to take your studies—or career—to the next level. You may find yourself having to communicate your transformative data to the general public, most of whom have not taken even a basic science course since high school. Other times, you might be competing with other researchers from a variety of disciplines for grant money by appealing to a board made up of people who have no experience in your discipline. Either way, learning how to capture the essence of your work and communicate it to those who do not speak your field's “language” can make or break your ability to pursue your research goals.

Harmon and Gross (2010) provide us with a list of six suggestions that scientists and graduate STEM students can incorporate into their writing practices to help bridge the gap between scientific writing meant to be published in academic journals and writing to be consumed by more generalized audiences. Using these suggestions as a guide, you can begin to translate the complex ideas in your research for audiences who do not possess your mastery of scientific subject matter. Remember that even accomplished researchers from other fields of science may not be able to understand your work fully!

**SUGGESTION 1: *Follow a simple overall plan, a structure consisting of three elements: context, problem, solution.***

Public audiences are not as interested in your review of existing scholarship or by your extensive list of references as your scientific peers would be. While those elements should certainly be available, your public-facing work should focus on 1) providing your audience with relevant background information about your subject, 2) providing them with the issue you are confronting with your research, and 3) what solution you have found after performing your research.

**SUGGESTION 2: *Give your article an attractive title and headline that convey the main message in plain language.***

Titles are to entice, not to inform. Avoid turning your title into a “mini abstract” and instead look to pull in potential readers. For example, “Homogenized NiOx Nanoparticles for Improved Hole Transport In Inverted Perovskite Solar Cells” is a great, informative title for a

scientific journal, but most of us who do not study in that field of science would be left completely lost if you put that title in front of us. Make it short and catchy.

**SUGGESTION 3: *Begin your article with a fact, situation, or anecdote designed to build a bond between you and your potential readers, then introduce the problem or discovery.***

An introduction to a public-facing science article should include a (1) hook, (2) background, and (3) new research. Just like for Suggestion 2, you have to grab and keep the attention of non-scientists! Reel them in with a relatable situation or story and then deliver your information in an easily digestible way.

**SUGGESTION 4: *In your conclusion, do not merely sum up; also talk about your science's future and its wider implications.***

For a non-industry science article, a conclusion should have four components (instead of the typical three: reiteration, wider significance, future work): reiteration, wider significance, future work, moral. General audiences want to know how your work impacts them! Don't forget to make those connections clear.

**SUGGESTION 5: *Adjust your writing style by defining central technological terms, incorporating informal language into formal prose, and employing figures of speech like metaphor not only to enliven and explain but also as organizing principles.***

Using figures of speech like simile, metaphor, and personification can help readers understand complex science. Sometimes, organizing the article around a central metaphor can help clarify even further. We may not know what power conversion efficiency is, but if you tell us that it's "like" something else we do understand, that can go a long way toward ingratiating your audience toward your work.

**SUGGESTION 6: *Adapt your tables and illustrations to a general audience by means of strategic simplifications and amplifications.***

For general audiences, instead of having visuals make their own claims, have them simply back reinforce the text. Three steps for transitioning visuals from a scientific context to a public facing context: 1) Strip away technical jargon only understood by specialists (if you have to question if a layperson could understand it, let it go); 2) Draw upon all textual and visual tools available to help readers understand (color, legends, labels, etc.); 3) Make sure everything is in plain language.

## References

Harmon, J.E., & Gross, A. G. (2010). *The craft of scientific communication*. University of Chicago Press. <https://doi.org/10.7208/9780226316635>