Three Unbeatable Online Resources to Improve Your Scientific Writing

Writing is an essential part of research and, for many scientists, it is also one of the most feared aspects of the process.

Writing impacts the research process in lots of its aspects, starting from the simple communication of ideas to the publication of the results or the financing of new projects. Therefore, efficient writing is not likely to be overestimated.

Improving your scientific writing is critical for clearly and skillfully express your expertise and this reflects in writing better proposals, well-quoted publications and successful grant applications.

Writing accurately but skillfully is an art that can be learned.

So, **where can you start from learning the art of writing wel**l?

Here are 3 essential online resources:

1. Improving your scientific writing: a short guide, by Frederic D. Bushman, PhD (Ctrl+click to follow link)

Frederick Bushman, an experienced professor at the University of Pennsylvania, is the author of a concise downloadable guidebook that provides simple guidelines for a clear and efficient writing.

He states that "Only through effective writing and speaking can scientists convey the importance of their work and gain ongoing support".

The guide shows the writers how to highlight clearly and concisely the essential of their works. In Bushman's words: "The simpler the better. Simplify. Every dispensable word you remove highlights your content".
"Politics and English" by George Orwell, "Style Elements" by Strunk and White

and "On Writing Well" by William Zinsser are the three classic works on which Bushman bases his ideas about writing. Bushman specifies that although the mentioned works deal with the problems of writing in general, they also apply to the scientific one, being more useful even than the guides specifically dedicated to the scientific style.

The guide covers editing issues, giving advices on how to write research papers, grant applications, and other scientific texts (emails included!). Bushman also refers to word usage common in scientific writing and visual data display.

***2. Scientific writing booklet* by Marc E. Tischler, PhD (Ctrl+click to follow link),**

Marc Tischler, a PhD. Professor at the University of Arizona, wrote an interesting short downloadable document. He offers specific tips for a better scientific writing, insisting on simplicity and clarity.

The booklet provides general guidelines for writing a scientific work using an outline to prepare the paper. It also approaches the writing of titles and abstracts. Specific sections offer advices for formulating the main parts of a research paper: Introduction, Methods used and Results, Discussion and References, outlining the questions to address and the way to address them. Furthermore, Tischler provides concrete examples, showing the reader how to turn a wordy language into clear scientific sentences. Besides, the booklet offers examples of simple and complex tables and examples of reference formats from selected journals .The document provides exercises, as well as a list of additional resources.

3. *The science of scientific writing*, by George Gopen and Judith Swan

(Ctrl+click to follow link)

George Gopen a writer and professor of rhetoric and Judith Swan a teacher of scientific writing at Princeton University wrote an amazing article offering concrete guidelines for writing improvement.

“Science is often hard to read. Most people assume that its difficulties are born out of necessity, out of the extreme complexity of scientific concepts, data and analysis. We argue here that complexity of thought need not lead to impenetrability of expression; we demonstrate a number of rhetorical principles that can produce clarity in communication without oversimplifying scientific issues. The results are substantive, not merely cosmetic: Improving the quality of writing actually improves the quality of thought.” they wrote.

The authors advise to write with the reader in mind. Their entire conception is based on readers’ expectations. “Information is interpreted more easily and more uniformly if it is placed where most readers expect to find it” the authors wrote. Therefore they teach the writer how to construct the sentence structure with regard to the stress position and the topic position of the information within the sentence.

This selection of online resources offers some great advices and guidelines very useful to improve your writing skills and become stronger writers for a successful academic career.