



“Physics in Canada”

Book Review

“La Physique au Canada”

Critique de livre

**“Communicating Science – A Practical Guide for Engineers and Physical Scientists”**, by Raymond Boxman and Edith Boxman, World Scientific, 2016, ISBN: 9813144238, pp: 288, price 44.17.

When I saw this title in the list of books to be reviewed for *Physics in Canada*, I was immediately interested. In the 2017 winter semester, I taught a new core course for physics majors at the University of Guelph that focuses on communicating science to non-technical audiences. The title and brief description of the book suggested that some elements could be useful as required reading for future offerings of the course. Having now read the book, it is clear that my students are not the intended audience. What is not clear, however, is who the intended audience actually is.

In my opinion, the single most important rule of communication – in any forum, about any subject – is know your audience. Everything follows from this starting point, from the content, to the duration, the modality, the tone, the detail, the analogies, the examples, the illustrations, etc. Before even reading the book itself, the description on the back suggests that different chapters were written for very different audiences: the 67-page long chapter on writing research reports (journal articles, theses) is intended for graduate students, whereas the comparably shorter chapters on business plans (14 pages) and patents (18 pages) are intended for researchers further along in their careers who are interested in commercializing their results. The last chapter on “Writing Well” is the longest piece of the entire book: 80 detailed pages of guidance that include a table of word-processor features (such as spell-check and automatic numbering of references and figures) and almost 19 pages explaining verbs, verb tenses, verb voice, including five tables defining verbs commonly used in the physical sciences. Three pages alone in this final chapter are devoted to the use of “a, an, and the”. This chapter could really only be targeted to readers for whom English is a second language.

The shortest chapter, at 10 pages, is “Reports in the Popular Media”. This is what I was expecting to be the main focus of the book based on its title. Their brief discussion is prefaced by saying that communicating with a wider audience can be useful for encouraging the support of taxpayers for continued government funding or for recruiting students to our disciplines. This has always struck me as a rather narrow view of the value of science communication. Early in this chapter the authors note:

*“The organization of the various genres for communicating with the general public mentioned in section 8.2 are very different, and detailed guidance is beyond the scope of this book. ... The most important suggestion for preparing any popular publication is to read many examples from the target publication and to note the acceptable content and style.”*

Since a detailed discussion of the various genres for communicating with the general public is exactly what I was looking for, I will not be using this book in my course.

The main question then – does this book meet the needs of any of the possible aforementioned target audiences? Unfortunately, I don't believe that it does.

Graduate students at the beginning of their studies? The chapter on writing research reports reads as though the authors are assuming that their audience has never read a journal article.

Statements such as “The Procedure section describes the sequence of steps taken to obtain the results.” and “The Results section presents the results.” are just two examples of instances in which the authors could have made assumptions about what their audience already knows. The following chapter on the article submission and review process could be helpful to a first-time author, but the advice found here is the same as would be delivered by the research supervisor or supervisory committee. I just don't see a busy first-year graduate student reading through 67 pages to find useful advice amid the more obvious statements like “Connective words commonly used include: although, however, despite, though, but.”

Researchers exploring commercialization? Again, there is useful information in the two chapters related to business plans and patents, but there is also a lot of detail that is likely unnecessary. Anyone considering this route will surely do their homework by reading related patents, so a table on patent jargon (that defines words such as ‘aspects’ and ‘embodiment’) seems excessive. Most researchers would likely do better to start exploring business plans and patents by searching online or consulting with the IP and commercialization support staff at their institution.

Perhaps the book is best suited to a graduate student beginning his/her career with English as a second language. It is a detailed discussion of writing and presenting science to colleagues and peers, addressing the minutia of grammar and style in technical communications for those unfamiliar with the language.

For those, like me, interested in a great read on communicating science to non-technical audiences, I highly recommend Alan Alda's recent book: “*If I Understood You, Would I Have This Look on My Face? My Adventures in the Art and Science of Relating and Communicating*”. I will definitely use excerpts from Alda's lighthearted and insightful memoir in discussions with my students in Science Communication at the University of Guelph next winter.

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