

BOOK REVIEW

How to Write and Publish Scientific Papers

Author: Robert A Day
 Publisher: Organización Panamericana de la Salud, 2nd edition in Spanish, 525 Twenty-Third Street, N.W., Washington DC 20037, USA
 US\$ 18.00

Every researcher has - or needs to have - a bit of the writer in him/her, since the purpose of scientific research is the publication of results. This view may worry mainly researchers who are starting their scientific career and feel they lack the skill to write, which may be seen as a consequence of their not having received an adequate training in the art of writing. Indeed, is not an easy task to put on paper our hypotheses, results, and above all, discuss them, since this requires time and training; let us not forget that, in our profession, we are assessed on our ability to convey our ideas and impart information. Thus, it is not surprising that several authors have dedicated themselves to the production of works that deal with scientific writing. Perhaps the earliest example of a book teaching how to write and publish scientific papers is found in Fishbein and Sunyer's work, published in English in 1948 and translated into Spanish in 1954, by *Prensa Médica Mexicana*, under the title *Normas de Literatura Médica*. Later on, many other books were published in different languages, including Portuguese. The most important example in Brazil is provided by the book *Como Publicar Trabalhos Científicos*, published by Dr Luis Rey in 1972, being re-published in 1992, well extended, under the title *Planejar e Redigir Trabalhos Científicos*. It is an obligatory reference book and currently one the most consulted on this issue in Brazil. More recently, Organización Panamericana de la Salud has taken the initiative to translate into Spanish *How to Write and Publish Scientific Papers*, by Dr Robert A Day (1996).

This book, in 30 chapters, five appendices and one glossary, instructs in a didactic and very clear style the guidelines authors should follow, in order to improve the quality of their scientific papers, theses and article reviews, among other topics.

In the first chapter, Dr Day emphasizes that scientists ought to be learned and well-read, but he also points out that a scientific text is not a literary work and therefore, the language should not

be overtly complex. Scientists should avoid the use of metaphors or anything that may alter the style and context of the paper. The author discusses the origins of the scientific terminology as we know it today, which is focused on Introduction, Methodology, Results and Discussion. In subsequent chapters, he presents, in a clear and objective way, all the necessary steps authors must take in order to make their paper worthy of publication. He also gives instruction on how to write the title and stresses that since this title may be read by thousands of people, scientists are advised to be cautious regarding its elaboration. He explains that a good title shall be brief, with carefully selected words, so as to describe appropriately the content of the paper. He draws attention to the importance of the syntax, since he believes that most grammatical errors are caused by flaws in word order. He warns against the improper use of titles in series as well as abbreviations and slang, practices that must be avoided at all costs.

In chapter five, he shows how to cite authors with their respective addresses in the text. My view is that in this chapter, the author could have been more objective, since six pages of his book are given over to discussing the position of each author in a scientific publication. However, as he himself argues, this is a delicate subject, devoid of a conventional set of rules, which in turn may lead to controversy and may raise ethical issues.

In the following chapters, Dr Day describes in detail how to prepare the Summary, Introduction, Materials and Methods, Results and Discussion. In his own view, it is wise to begin writing the article hand-in-hand with the research in progress, since this approach facilitates the task of writing. The summary should be an abridged version of the article; it should be written in the past tense and should contain no information or conclusion beyond those found in the article. References only rarely might be included in a Summary.

Regarding the Introduction, he provides some practical rules including: (1) to expose the nature of the problem with insight, in order to catch the reader's attention; (2) to check carefully the relevant bibliography, with the purpose of guiding the reader; (3) to select the method, in such a way that the reader understands what the problem was and how it was solved; (4) to mention the principal results of the survey; (5) to define the principal conclusions suggested by the results. In his opinion, the reader must not be kept in suspense as regards the obtained results.

In the chapter dealing with Materials and Methods, he explains that "*this section has a critical importance because the cornerstone of the scien-*

tific method requires that the results be reproducible". According to him, a good referee should pay special attention to this section of the text; in case of doubt regarding the possibility of reproducing the experiments, he/she should reject the paper, even if the results and conclusions are outstanding.

In the chapter on Results, he advises that the text be short and objective without verbosity. The data need to be presented simply and clearly, since they represent new knowledge emerging in the world. He warns against the tendency to repeat in words results already exposed in figures and/or in tables, a recurrent error, mainly in young researchers.

Regarding the Discussion, once again he stresses the importance of avoiding redundancy and makes clear that in this section of the paper results are to be explained and commented upon, but never summed up. He asserts that scientists must be level-headed, but not shy, exposing with lucidity and courage the theoretical consequences and the possible practical applications of their researches.

Even apparently simpler issues, such as the section of acknowledgments, have not escaped attention in his book. He also shows how to cite references and how to devise tables and useful illustrations. He provides instruction on how to write a thesis, how to prepare a lecture, how to elaborate a congress poster and how to produce a book report.

He demonstrates how to proof-read scientific papers and how to deal with the editorial board of the journal where the manuscript was sent. He advises the issues of ethics and the rights of the author and discusses the care that is required to ensure the originality of the paper, in order to avoid accusations of plagiarism or of any violation of intellectual property.

Dr Robert A Day's book is, consequently, an important reference book for researchers, whether beginners or not, post-graduate students and referees of scientific reviews. It is written in clear, simple and humorous language. In my view this is what makes the reading of the book lighter and more pleasant than most texts on this subject, although it may be considered irrelevant by orthodox readers.

The initiative by *Oficina Panamericana de la Salud* to translate the book into Spanish was commendable, extending its availability among biological and biomedical researchers, thus adding one more useful textbook on the art of writing scientific papers.

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