

# WEBWORDS 10



## Clinicians who do research: Hands-on scientists

Caroline Bowen

Clinicians who do research become accustomed to varying their literary style as easily as they switch from talking to colleagues in professional terms, to conversing with clients and their families in a language they understand and relate to. These hands-on scientists are already professional writers. They know that there are marked differences between the tenor and style of well-constructed clinical notes, letters and reports, and the conventions used in academic writing. The IMRaD <http://www.imrad.net/> format: Introduction, Methods, Results and Discussion, is the basic structure for writing a research paper for publication in scientific journals internationally. It is a familiar, comfortable format within which to conceptualise and organise the research process for empirical studies, case reports, discussion papers, literature reviews, and theses. In this edition of Webwords [http://members.tripod.com/Caroline\\_Bowen/webwords10.htm](http://members.tripod.com/Caroline_Bowen/webwords10.htm), IMRaD provides a useful framework for a brief exploration of the array of Internet resources available to clinician-researchers who want to do more than simply talk about their findings and who want to publish their work, and some of the issues they will encounter.

### Introduction

An effective introduction is relevant, brief and enticing. The aim is to say succinctly why the research was done, review the related literature highlighting key issues, and draw the reader in. If the study included one or more hypotheses, they will be described in this section in concrete (rather than theoretical) terms, indicating the outcome the researcher anticipated from the investigation. This sounds straightforward enough. But it is the part of a paper most likely to induce that bi-polar condition that even prolific and polished academic writers dread. It manifests in seemingly endless procrastination or the production of lengthy waffle, leading nowhere. The antidote may be found in the Academic Writer Contents <http://vlc.polyu.edu.hk/academicwriter/Questions/writemodeintro.htm> and augmented by inspiration from the Association of College and Research Libraries <http://www.ala.org/acrl/resfeb01.html>, the unpretentiously titled Writing Tips <http://www.writersblock.ca/tips/a-tips.htm>, and measured doses of APA <http://www.apastyle.org/index.html> or other more general writing style guides <http://www.quintcareers.com/writing/style.html>. Expert advice <http://www.utoronto.ca/writing/advise.html> on academic writing, and some guided searching on CD-ROM (Stamps & Barach, 2001) may also help the literary juices to flow.

### Methods

The methods <http://trochim.human.cornell.edu/kb/> (or methods and materials) section details precisely how the study was conducted, including the experimental design [http://www.psychnet-uk.com/experimental\\_design/index\\_experimental\\_design.htm](http://www.psychnet-uk.com/experimental_design/index_experimental_design.htm), and how the data were collected, classified and analysed [http://www.psychnet-uk.com/experimental\\_design/cornells\\_statistic.htm](http://www.psychnet-uk.com/experimental_design/cornells_statistic.htm). The

chapter on methods in George M. Hall's (1998) invaluable *How to write a paper* <http://www.cma.ca/catalog/08227.htm> is particularly helpful, while the HEM Glossary of Statistical Terms <http://www.hbem.com/library/glossary.htm> provides a quick reference for basic measurement concepts. The remarkably accessible Exploring Data [http://exploringdata.cqu.edu.au/read\\_me.htm](http://exploringdata.cqu.edu.au/read_me.htm) website contains more detailed guidance and resources.

### Results

The element of surprise is usually missing from the results section because the abstract pre-empted the announcement of what you found. Nonetheless, this is where authors describe in detail their research findings. When deciding on the most powerful and transparent means of displaying data, it is worthwhile exploring both the SPSS Science <http://www.spssscience.com/> site and the Minitab Homepage <http://www.minitab.com/>.

### Discussion

Now the writer can go to town! Let rip! Have a field day! Really get stuck into it: provided he or she remembers not to use expressions like that! A formal, respectful (of the reader), and scholarly tone <http://www2.marianopolis.edu/styleguide/2.htm> must be maintained throughout (Phillips & Pugh, 2000). This is the section of the paper devoted to a detailed, and hopefully interesting, discussion of the overall finding(s), the strengths and weakness of the study compared with other studies, an exploration of why the study's results were different from any predecessors, the clinical and policy implications of the work, what questions are unanswered, and directions for further research.

### Acknowledgements and appendix

The little "a" in IMRaD reminds the author to include necessary acknowledgements to colleagues, sponsors, funding agencies, participants in the research, and reviewers who provided constructive criticism prior to publication, and to organise and write up any appendices [http://members.tripod.com/Caroline\\_Bowen/webwords10appendix.htm](http://members.tripod.com/Caroline_Bowen/webwords10appendix.htm).

### References

- Hall, G. M. (1998). *How to write a paper* (2nd ed.). London: BMJ Books.
- Phillips, E. M., & Pugh, E. S. (2000). *How to get a PhD: A handbook for students and their supervisors* (3rd ed.). Buckinghamshire: Open University Press.
- Stamps, R. F., & Barach, P. M. (2001). *The therapist's internet handbook*. New York: W.W. Norton.

Correspondence to:  
**Dr Caroline Bowen**  
*email: cbowen@ihug.com.au*