

What is special about science editing?

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What is science editing?

Science editing is just like any other type of editing — what makes it special is the content, which is scientific information of some kind. This could be anything from an academic book about air pollutants to a research report of a clinical trial or a fact sheet on the benefits of eating a high-fibre diet. The text may therefore include many technical terms and complex ideas. There are also a large number of style rules to be followed (such as for units, chemical names, mathematical notation, and animal and plant classification).

What do science editors edit?

Research articles for scientific journals (complex, set format)

- Tasks: check organisation and clarity of information; apply scientific conventions, consistent terminology and house style.
- Readers: other scientists.

Scientific reports, manuals, textbooks, brochures etc (various formats and styles)

- Tasks: provide clear structure for information, explain terminology, apply consistent style.
- Readers: scientists, policy makers, administrators, teachers, general public.

What skills do you need to be a science editor?

This is a topic that is frequently debated. Most agree that any competent editor can edit science information, especially publications intended for the general public.

BUT

To be a 'science editor' you need:

- good language skills
- science training or experience working in a science research environment
- good analytical skills
- access to a good library of science books and information
- a questioning mind
- plenty of time.

What do you need to know?

Science editors need a good understanding of:

- principles of scientific investigation

- types of evidence and statistics
- units, numerals, symbols
- scientific nomenclature — animals, plants, microorganisms; chemicals; soils, minerals, rocks, etc; anatomy (medical and veterinary)
- presentation of data (graphs, tables)
- referencing requirements, conventions and styles
- scientific publishing issues (eg copyright, conflict of interest).

What are the problems?

Probably the biggest problem in science editing is the style of language used by scientists, with its passive voice, jargon, long sentences and abstract expressions, such as ‘Analysis of the samples was carried out’ rather than ‘The samples were analysed’. These problems are covered in more detail in the last session of this workshop (‘Editing for clarity — challenges for science editors’). One of the hardest parts of a science editor’s job is convincing authors that complex scientific ideas can be expressed clearly, succinctly and in plain English without ‘dumbing down’ the science.

Another problem is that authors are often too busy to properly review their work. The peer review process depends on the input of other very busy scientists and is therefore often done ‘on the run’ and very badly. Editors are often the first people to carefully analyse a piece of work and can pick up many errors and inconsistencies. Some authors are receptive to this process and quickly form a strong relationship with the editor. Others can be defensive and difficult to deal with.

What are the benefits?

Science editing is challenging, but it provides a wonderful opportunity to find out what is going on in all sorts of areas, and to help put the results of research into a form that is accessible to a much wider audience. By bringing a fresh eye and perspective to a document, a skilful science editor can help arrange information so that new insights emerge, which may not have been apparent before (even to the author).

Where can you train?

Science editing is taught as a component of some graduate certificate and masters courses in science communication and some other technical writing courses, but often not in great detail.

There are a number of general editing courses available around Australia, both at certificate (TAFE), degree and postgraduate certificate levels and some of these also contain a science editing component. There are also numerous short courses run by the state and territory editors societies, adult education colleges, etc.

There is no specific accreditation or qualification for science editors in Australia. The only international qualification that is widely recognised is certification by the Board of Editors in the Life Sciences (BELS) as an ‘Editor in the Life Sciences’ (ELS), which is obtained by examination. BELS is based in the United States and was founded in 1991 to evaluate the proficiency of manuscript editors in the life sciences and to award credentials similar to those obtained in other professions. It now has hundreds of members in the United States, Canada, Europe and elsewhere, and the number of members in Australia is growing. (See <http://www.bels.org/>)