Core Skills For Scientists

The Craft of Scientific Writing
Advanced Level

Course Synopsis

This course relies on writing assessment tools (the NASA grammar; SWAN - the open source Scientific Writing Assistant from Joensuu University; and Word's grammar and style checker) to identify a paper's weaknesses and strengths. Using Professor Gopen's approach in writing from a reader's perspective, the course shows how to rewrite paragraphs to control and channel reader expectations through sentence fragment reordering, judicious use of punctuation, and adjustment of sentence/length. The course also includes a complementary walkthrough to identify structural problems in the paper. The course includes first person interviews and articles of journal editors and others who reveal their decision-making process and the role of reviewers. It covers how to deal with paper rejection, how to address the reviewer's comments, how to keep ethical in follow-on, review, or collaborative papers (first author and plagiarism issues), and how to identify the correct journals and avoid being trapped in low impact journals. It proposes a visual strategy (figures and tables) more likely to lead to paper acceptance.

Target Participants

Mid-career and senior researchers and faculty possessing moderate to considerable experience writing professionally in English and publishing in English-language scientific journals and publications.

Course structure

Module 1: Tools to assess the quality of one's writing

Module 2: Publication and revision strategies: learning from reviewers, Journal editors, Nobel laureates, and writer scientists.

Module 3: Rewriting from a reader's perspective: George Gopen's approach to reader-guided, fluid, and convincing writing. Redrawing for clarity of purpose and rapid understanding.

Module 4: Ethics of writing, and attitude of writer towards reader

Mode of Assessment

Participants bring to the course **a published paper they have written.** The paper should have informative headings and subheadings, not just the bland IMRAD structure (introduction, methodology, results, and discussion). It should be 6 to 12 pages in length, but should not be a review paper or a short letter. At the end of the course, the participant is able to identify efficient and deficient parts in his or her paper. Each day ends with an iBook-created MCQ for all participants (projected from an iPad).

SWAN
Scientific Writing Assistant

Methodology

Given the writing experience of the participants, the participants themselves become an essential class resource. At times, the whole class contributes ideas collected on a flipchart . There are also reading assignments with guided questions debated in larger groups (modules 3,4). This course relies on computers to run the assessment tools and to rewrite paragraphs, therefore, it is essential that participants come with their own computer, or that computers are made available to them on the training premises (module 1). The rewriting exercises (module 3) are for groups of 2 because, at this level, learning requires rapid personal consolidation.

Duration

two days

Your Trainer

Jean-Luc Lebrun has managed research programs while working at Apple Computer in its Advanced Technology Research group for over ten years. He subsequently invested his energy in the commercialization of research. For the past twelve years, he has been conducting the scientific writing course at the following A*Star life and engineering science research institutes: BII, BSF, BTI, CMM, DSI, GIS, I2R, IBN, ICES, IHPC, IMB, IMCB, IME, IMRE, NMC, SBIC, SICS, SIMTECH, and SSCC. He also teaches in two Singapore universities (NUS, SMU), medical research Institutes (NCCS, NUHS), and in France, Italy, and Finland universities or European Authorities.

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