

Editor Training at the American Society for Microbiology

When I returned to the American Society for Microbiology (ASM), the oldest and largest life-science membership organization in the world, as a copyeditor in October 1997, I was struck by the changes in the Journals Department. The staff comprised about 35 employees, including the director, the managing editor, the manager of editorial style and training and her assistant (responsible for hiring and training copyeditors), copyeditors, production editors, assistant production editors, and clerical and business staff.

I had first worked for ASM in 1972, fresh out of Duke University, when the Journals Department consisted of fewer than eight copyeditors—production editors, Managing Editor Bob Day, and the director of editorial services, who supervised training. At that time, ASM published only six journals, and the relatively informal training relied on the guidance of the supervisor, hands-on experience, and a slim booklet of style rules.

In the 30 years that ensued, microbiology experienced an explosion in growth and discovery that led to the creation of several new journals at ASM, a huge increase in the number of published manuscripts (from about 2100 in 1972 to 6800 in 2002), and the addition of editorial staff to handle their publication. The *ASM Style Manual* grew to accommodate new scientific nomenclature and more formalized rules of editing, becoming a loose-leaf tome of more than 100 pages. To ensure consistency in style and maintenance of high quality and production-speed standards, training had evolved into a 6- to 7-month period that provided copyeditors with all the skills they needed to become productive members of the department staff, capable of editing and proofreading manuscripts for all 11 of our journals. But in spite of the many changes in the department, the fundamental qualities of ASM's copyeditors—excellent language skills and an eye for detail—have remained the same.

Our Staff

The Journals Department editorial staff is a diverse group. Some copyeditors came to ASM straight out of college, others after years in different careers; and the degrees they hold are as varied as bachelor's degrees in religion and geology and doctorates in art history. A few of our staff members arrived with laboratory experience or

science degrees, but such a background is not required. All the editorial staff members started as copyeditors, and all have a love of language and good grammar. Trainees are hired not only on the basis of their applications and resumes but also on the basis of their performance in a brief copyediting test, a spelling test, and an interview.

Trainees with little editing experience often arrive at ASM wondering how training could possibly take 6 to 7 months but soon recognize that that length of time is brief, given what they are expected to learn. In the course of training, they work under close supervision with our two trainers—me (manager of editorial style and training) and my assistant, Margaret Milhous—editing “live” manuscripts in a variety of subfields for nearly all 11 journals that ASM publishes (*Journal of Bacteriology*, *Journal of Virology*, *Molecular and Cellular Biology*, *Journal of Clinical Microbiology*, *Infection and Immunity*, *Clinical and Diagnostic Laboratory Immunology*, *Antimicrobial Agents and Chemotherapy*, *Applied and Environmental Microbiology*, *Eukaryotic Cell*, *Clinical Microbiology Reviews*, and *Microbiology and Molecular Biology Reviews*). In addition, they are deliberately given manuscripts with specific editorial challenges requiring special handling that occur routinely. Becoming familiar with the contents of the *ASM Style Manual* is another goal for trainees. It contains chapters on the preparation of manuscripts, numbers and measurement, scientific nomenclature, English, sources for materials, abbreviations, references, illustrations, tables, and proofreading, and it includes a 54-page list of frequently occurring words, abbreviations, and designations. In addition to learning our style, the trainees must become adept in editing electronically.

The Training Process

Since our transition to electronic editing about 2 years ago, the training program has changed from exclusively manual to primarily electronic. Trainees still must learn the standard copyediting marks for use on page proofs, but most of their editing is done electronically. Although we customize the training program to a degree, depending on the skills and experience that a given trainee brings to the position, the process remains essentially the same for everyone.

Typically, in the course of the first 2 weeks, the trainee works closely with me in manually

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editing a live paper. I edit the first, usually short manuscript (or two) with the trainee looking on; I indicate how to make editing marks and constantly refer to the *Style Manual* to emphasize where material can be found. The trainee's first independent copyediting is usually devoted to the reference section of a paper because our style for references is specifically spelled out and application of the rules requires little judgment. We require the trainee to verify every reference to an ASM journal article or book by checking the bibliographic data in our bound journals. The trainee spends half his or her day studying the *Manual* during the first 2 weeks and then an hour a day for the rest of training. When I sense that the trainee is ready to try editing alone, he or she is instructed to pick up a live manuscript from a continuously replenished stack carefully selected for specific challenges.

During the second week of training, the trainee is introduced to the variety of print resources in our reference room and instructed in the use of a few online resources and our manuscript tracking system, a database of all manuscripts submitted to ASM.

By week 3 or 4, the trainee is moved to electronic editing, although continuing to mark up the title page and references by hand to practice the manual editing marks. The trainee reads the manuscript twice, making editing changes that apply our style rules and the elements of good grammar to the best of his or her ability. The Track Changes feature in Word is used so that all the trainee's electronic editing is readily apparent on the screen and on a color copy of the edited manuscript that is returned to the trainer. A trainer then reads the edited manuscript, marking all necessary changes on the printed Track Changes copy. Throughout training, the trainee is encouraged to take questions directly to the trainers so that guidance can be given and the relevant sections of the manual can be pointed out. Substantive editing by ASM staff is not permitted, so that the author's voice will be preserved. The trainee incorporates all the trainer's corrections into the electronic file of the manuscript and makes any additional corrections that he or she thinks are necessary during a third read. The trainer then reads the electronic file of the manuscript once more, marking new corrections in a different color of ink on the printed version. The trainee makes these last "flagged" changes without rereading the entire manuscript and prepares the paper to be turned in to the appropriate production editor.

Before the end of the first month, figure sizing, figure-caption editing, and table editing are introduced in a classroom setting, and the trainee is given several sample figures and tables for practice.

During the second half of the training period, the manuscripts chosen for the trainee are longer and more difficult in content or editorial challenge. We introduce more papers from the basic-science journals, papers that require more judgment regarding wording (such as papers by foreign authors), and papers with problem tables and figures. We help the trainee develop judgment in knowing when a problem requires contact with the author and the appropriate method of querying.

The trainee edits two "hidden" test manuscripts—one before the 3-month mark and one toward the end of training. The same manuscripts are used for all trainees, so they provide a relative measure of the quality of a trainee's work and indications of progress and future success.

In addition to monitoring the quality of the trainee's work and increase in knowledge of our style, we closely assess the trainee's copyediting speed. Publishing more than 55,000 pages per year in our journals (data for 2002) requires that our copyeditors be able to do quality work at a good speed. Therefore, we have established intermediate editing speeds during training to ensure that, on promotion, copyeditors will be able to achieve our established editing quota within about 4 months after training.

About a month before promotion, the trainee moves into proofreading and spends the bulk of the remaining few weeks developing this skill.

To facilitate communication between trainers and trainees, informal evaluations are held at the 1-, 3-, and 5-month points to keep trainees apprised of their progress, their performance on the test manuscripts, and future challenges. At the 5-month chat, a tentative promotion date is set. Once a trainee's work is relatively free of errors and is of good quality overall and his or her questions do not reflect a lack of knowledge of the *Style Manual*, the trainee is recommended for promotion to copyeditor status. We then ask for feedback from the trainee in the hope that the training process can be improved.

The training program for copyeditors is not static; it evolves to meet the continuing changes in the field of microbiology but with the constant goal of maintaining the highest-quality product.