

Train Up an Author in the Way They Should Go: The Role of Societies and Journals in Teaching the Review and Publication Process

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When writing an academic manuscript, authors pay close attention to the guidelines and formats specified by their target journal; however, for much of the review and publication process, journal guidelines can be vague, incomplete, or unavailable to the author or reviewer. This commentary advocates for journals and societies to make their expectations for both authors and reviewers well-documented, easy to understand, and transparent, and for these groups to take a more active role in training the next generation of scientists.

Research is a challenging enterprise, especially for students and trainees. Studying the theory and history of one's discipline, perfecting bench and field skills, and learning the mathematical and computational tools for rigorous analysis all take effort, dedication, and effective instruction. For most researchers, well-established programs of education and training exist to teach students the competencies they need to be successful. When it comes to communicating one's findings, most graduate programs teach the fundamentals of writing a scientific paper, including which information needs to be included, how a manuscript should be formatted, and how to permanently and transparently archive raw data and analyses.

However, professional training becomes much more nebulous when navigating peer review and publication. Trainees often encounter a confusing system of official and unofficial mentors who help them navigate the review process. Ideally, trainees have mentors who are skilled writers with plenty of peer-review and publication experience and who have the time to shepherd their students through this gauntlet. Often, trainees must cobble together a network of more experienced trainees and online resources, and then

learn through trial and error. The largely unwritten rules of peer review and publication also affect seasoned researchers; for example, those puzzled by the differing conventions of a new field, or who simply have become a bit lax with their reviewer responses and may need a refresher. A more formalized system for training researchers to negotiate the review and publication process would be a welcome complement to the current mentorship system, and societies and journals are an obvious choice to play a supportive role. Journals administer the peer-review process that forms part of the foundation of the trust society has placed in science. As these crucial gatekeepers, journals have their own standards of quality. Who better to communicate the standards by which manuscripts are judged than those who make the rules?

Clearer expectations and guidelines coupled with more complete documentation and more active training would reap benefits for all stakeholders in the publishing process. For new authors, clearer guidelines for manuscript writing will improve the quality of early drafts, which may result in more favorable first-draft editorial decisions. Better documentation of the typical review timeline and explicit guidelines for responding to review comments will alleviate stress in new authors, and may result in not only more favorable decisions on revised manuscripts, but also fewer rounds of revision. For graduate students and postdocs at a critical, time-sensitive stage of their careers, quicker turnaround of manuscripts is especially important. For reviewers, clearer guidelines for writing peer-review reports will help ensure authors thoroughly address all points in the first revision, thereby reducing time spent on, or even obviating the need for, subsequent rounds of review. For editors and production staff, cleaner manuscripts require less editing, and complete responses to reviews decrease revision time per manuscript.

Likewise, agreed-upon a priori standards, improved documentation, and active training of reviewers will pay dividends throughout the academic community. Increased training for reviewers will improve the quality of reviews

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written by novice peer reviewers. Although practice varies considerably by field, for many biological disciplines, authors are considered potential reviewers once they have published at least one first-author paper. This means that many later-year graduate students and most postdocs are serving as reviewers. While some journals require reviewers at this career stage to coauthor reviews with a more experienced mentor, many do not. This can sometimes lead to reviews that are overly critical from new reviewers trying to establish their “serious scientist” bona-fides, or reviews that focus more on minutiae than on deeper issues with a manuscript. Even established reviewers could use the occasional reminder that the goal of their review is to help make a paper stronger. Written guidelines and additional training resources from a journal, in addition to cowriting reviews, can help new reviewers give more helpful feedback more quickly. Reviews that are more consistent and more focused on strengthening the science will let authors focus on the most pressing concerns of their manuscripts, speed the review process, and decrease editors’ workloads.

For journals and societies that wish to take a more active role in the training process, I propose the following three broad steps:

First, evaluate your expectations for authors and reviewers. Have editorial teams and any other interested parties examine and articulate the journal’s standards. All journals have already determined many of the standards they value. Look for the gaps. Is there anything that could help make submissions more consistent, like requiring specific questions that need to be answered in a cover letter? Consider writing up expectations for the author regarding the timeline of revision. On average, how long from submission to editorial decision? How many reviewers look at most manuscripts? How many rounds of revision do most manuscripts go through? Showing authors some of the difficulties on the editorial side could go a long way toward engendering patience and buy-in. Does the editor routinely have to email 12 people to get 1 reviewer? Let authors know! They might accept more reviews in the future or make more reviewer suggestions.

Second, document your expectations. Look over your current author guidelines and add any of the new expectations you have developed. Revise your guidelines for clarity, signposting, and ease of navigation. Can someone unfamiliar with the journal find information quickly? Are important topics in bold or in bullet point format instead of embedded in paragraph-form prose? Are reviewer guidelines published on the website and are they as easy to navigate as the author guidelines?

Lastly, disseminate your expectations. Make sure your announcement of guideline changes has pride of place in the next email or newsletter. Add a link to author and reviewer guidelines to every correspondence with authors

and reviewers. A sample library of manuscripts and reviews from the journal would go a long way toward helping new reviewers gauge appropriate depth and tone. For journals affiliated with societies, workshops offered at a society’s annual meeting would allow graduate students and postdocs to learn submission and review procedures first-hand, and help them be more invested in their societies and associated journals. Consider advertising these workshops on relevant social media and listservs; this could help increase name-recognition among upcoming professionals in your field.

Before I became a scientist, I was a high school teacher. In that role, I saw just how critical it was to set up one’s expectations beforehand and to develop lesson plans based on those expectations. To help journals and societies think about their standards and documentation, I pose the following twenty questions to start the conversation:

Determine your expectations for authors and reviewers

1. Does your journal have a preferred cover letter format and clear expectations on what it should contain?
2. Does your journal have a preferred review format?
3. Does your journal have specific requirements or preferences for what reviewers consider?
4. Does your journal specifically advise reviewers on purpose, audience, and tone?
5. How transparent is the peer-review process; for example, do you allow/encourage reviewers to sign their reviews and/or peer review reports posted with accepted articles?
6. Is there an option for referring manuscripts to a secondary journal along with peer reviews (including identifying information)?
7. Does your journal have a preferred response letter format when submitting revisions?
8. Does your journal require authors to respond to all reviewer comments?
9. Does your journal have a rebuttal/appeal policy?

Document your expectations

10. Are the author guidelines written in plain language and in a logical order?
11. Are they signposted with typography or color, or better yet, clickable?
12. Are common and easily understood terms used to make the document more searchable?
13. Are reviewer expectations available in written format on the journal website?

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14. Are expectations for cost sharing (page charges, open access charges) stated in the author guidelines?
15. Are interpretations of review decisions included in plain language? What is meant by “reject,” “encourage resubmission,” and so on?
16. Are metrics such as average time from submission to publication, acceptance rate, reviewer acceptance rate, and impact factor available on the journal website?

Disseminate your expectations

17. Are sample manuscripts with reviews and response letters available on the website?
18. Does your society host a workshop on journal policies and author and reviewer best practices at your society meeting?
19. Do you highlight changes to author and reviewer guidelines in monthly newsletters and via social media?
20. Do you include links to reviewer guidelines in reviewer requests and author guidelines in author correspondence?

In proposing an increased role for societies and journals in the training of new authors, I do not seek to devalue the

role of mentorship. The importance of good mentorship in guiding new authors through peer review and publication cannot be overstated. Advisors have a more complete and nuanced understanding of their trainee’s needs, and as such, will always have an essential role to play. Rather, societies and journals can supplement the training of new authors and reviewers. These organizations are also especially well-suited to refreshing the skills of established researchers. While journals can support training and refreshing skills through development, documentation, and dissemination of a wide range of standards, each society and journal must decide what approach works best for them, and how subtly or radically they wish to get involved in training. For journals that wish to take a more active role in training authors and reviewers, there will be nontrivial commitment on the front end. Time, energy, and resources will need to be invested in reviewing and updating guidelines, redesigning websites, and building and administering training workshops. Those efforts will pay dividends in improved author and reviewer experiences, faster turnaround times, and most importantly, improved peer review and better science.