

Engaging the next generation of editorial talent through a hands-on fellowship model

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Abstract

Peer-review and subject-matter editing is the backbone of scientific publishing. However, early-career researchers (ECRs) are given few opportunities to participate in the editorial process beyond reviewing articles. Thus, a disconnect exists: science needs high-quality editorial talent to conduct, oversee and improve the publishing process, yet we dedicate few resources to building editorial talent nor giving ECRs formal opportunities to influence publishing from within. ECRs can contribute to the publishing landscape in unique ways given their insight into new and rapidly developing publishing trends (e.g. open science). Here, we describe a two-way fellowship model that gives ECRs a “seat” at the editorial table of a field-leading journal. We describe both the necessary framework and benefits that can stem from editorial fellowships for ECRs, editors, journals, societies, and the broader scientific community.

KEYWORDS

Early career researcher, editorial fellowship, open science, scientific publishing, society journals

THE PUBLISHING LANDSCAPE AND EARLY-CAREER RESEARCHERS

Challenges in scientific publishing are as diverse as they are complex, ranging from navigating the line between scientific rigour and the rising popularity of pre-prints (Kaiser, 2017), issues of equality and bias in publishing (Hofstra et al., 2020; Tomkins et al., 2017), limitations of metrics that evaluate research and researcher impact (Berenbaum, 2019; Statzner & Resh, 2010) and challenges of data availability and reproducibility (Pampel & Dallmeier-Tiessen, 2014). Many publishing challenges also disproportionately affect early-career researchers (ECRs)—for example, concerns about impact factor for job applications (Berenbaum, 2019) and biases in peer review (Tomkins et al., 2017). Still, the current

publishing framework places more senior scientists in charge of decision-making and establishing editorial policies (Schäfer et al., 2011). This occurs despite the fact that ECRs are often on the leading edge of publishing trends and positioned to provide key insight for journals navigating quickly changing editorial waters. For example, ECRs are more likely than their senior colleagues to view the emerging practice of posting ‘pre-prints’ prior to manuscript submission favourably (Soderberg et al., 2020); and ECRs are six times more likely to make their data public (Campbell et al., 2019). Here, we argue that ECR editorial fellowships designed around two-way knowledge exchange benefit not only the ECRs, but also journals, publishers and the broader scientific community through their unique perspectives on scientific publishing.

Despite the potential value of ECR participation, efforts to formally integrate ECRs into editorial processes,

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beyond simply serving as reviewers, have been limited. A few examples of editorial internships at medical journals exist (e.g. American Society of Clinical Oncology), and these opportunities provide a structured framework for ECRs to learn more about the process (Hopkins, 2018). In the life sciences, an editorial internship at the ICES Journal of Marine Science was recently created to aid ECRs in publishing with that journal and more broadly (Howard Browman, pers. comm.). To our knowledge, the primary motivation for these internship-type programs is a “one-way” training model where ECRs gain exposure to the publishing process and build their scientific networks. While still valuable to ECRs, a “one-way” framework does not necessarily provide opportunities for ECRs to engage with, and ultimately influence, publishing processes at their focal journal and beyond.

THE RAEALYN COLE EDITORIAL FELLOWSHIP: A CASE STUDY IN TWO-WAY ECR ENGAGEMENT

Here, we describe an alternative model for an ECR editorial program that emphasises two-way engagement between ECRs and publishers, editorial boards and the scientific community. In this model, Fellows are integrated beyond the peer-review process into all aspects of publishing and editing. They contribute intellectually through Fellow-led initiatives and input to decision-making and journal policy. This fellowship model views ECRs in the same way that the broader scientific community views postdoctoral researchers—highly experienced, independent, early-career colleagues with the potential to dramatically shape the conversations and projects they are involved in. We used this model to develop the Raelyn Cole Editorial Fellowship (RCEF; Soranno & Falkenberg, 2018) for the journal *Limnology & Oceanography Letters*, a short-format, open-access Association for the Sciences of Limnology and Oceanography (ASLO) journal founded in 2014 (Soranno et al., 2021).

RCEF Fellows serve 2-year terms that are staggered to ensure there are always two Fellows. This practice fosters collaboration and relationship building within the fellowship cohort. The Editor-in-Chief (EIC) of *Limnology & Oceanography Letters* makes the most significant commitment to the RCEF program. The Fellows and EIC meet monthly to discuss day-to-day workings of the journal and discuss current and future Fellow initiatives. These initiatives span (but are not limited to): scholarly articles, workshops, editorial programming and outreach. Importantly, the RCEF provides a supportive, collaborative space for Fellows to develop initiatives based on their interests. While all RCEF Fellows receive the same opportunities for engagement with editors and publishing partners, no two fellowships are the same because no two Fellows have the same background, interests and professional goals.

The financial costs for the RCEF are surprisingly modest. The program is supported by the professional society (ASLO) and an RCEF-specific endowment that was created through a donation from the family of the late Raelyn Cole, Managing Editor for the society's flagship journal from 1965 to 1996. Annually, each Fellow receives a \$1,500 stipend, waived society membership fees, support to attend one society meeting and funding to participate in an annual strategy day with the journal's publishing partner, Wiley.

BENEFITS OF A TWO-WAY EDITORIAL FELLOWSHIP

Beyond the obvious benefits to Fellows in terms of career development and networking, a two-way editorial fellowship model also holds tremendous value for editors, journals (including publishers), professional societies and the global scientific community (Figure 1). For example, RCEF Fellows have made a number of scholarly contributions that benefit a wide range of researchers including: examining the demographics and career trajectories of Associate Editors (Poulson-Ellestad et al. 2020); creating workshops to connect ECRs with journal editors (Deemer et al., 2020); describing ways to be a better peer reviewer (Falkenberg & Soranno, 2018) and improving manuscript preparation through writing guides (Hotaling, 2020). From a publisher's perspective, “opportunities to integrate ECRs into publishing are valuable since the sustainability and success of journals heavily relies on the big and bold ideas voiced by the next generation of researchers” (Fiona Sarne, Wiley, pers. comm.). From a scientific society perspective, editorial fellowships distribute leadership beyond senior and mid-career scientists, involve ECRs in key discussions and foster fun and creative discussions between editors, Fellows and the society membership that build community (Mike Pace, former ASLO President, pers. comm.). At the global level, resources produced by ECRs directly benefit the scientific community but equally important is the behind-the-scenes role that ECRs can have in driving editorial change.

While all RCEF products have benefited multiple groups, some efforts have captured benefits that stretch from the Fellow to the global scientific community. For example, a practical guide to concise scientific writing (Figure 2a; Hotaling, 2020) emerged from a Fellow's own early struggles with writing and manuscript preparation. This essay has been downloaded >50,000 times since June 2020. Such strong resonance with the scientific community, far beyond the typical reach of articles in *Limnology & Oceanography Letters*, has spurred the EIC to solicit similar articles targeting key scientific issues with wide relevance.

Another example is an early-career publishing honour (Figure 2b) which was conceived by RCEF Fellows

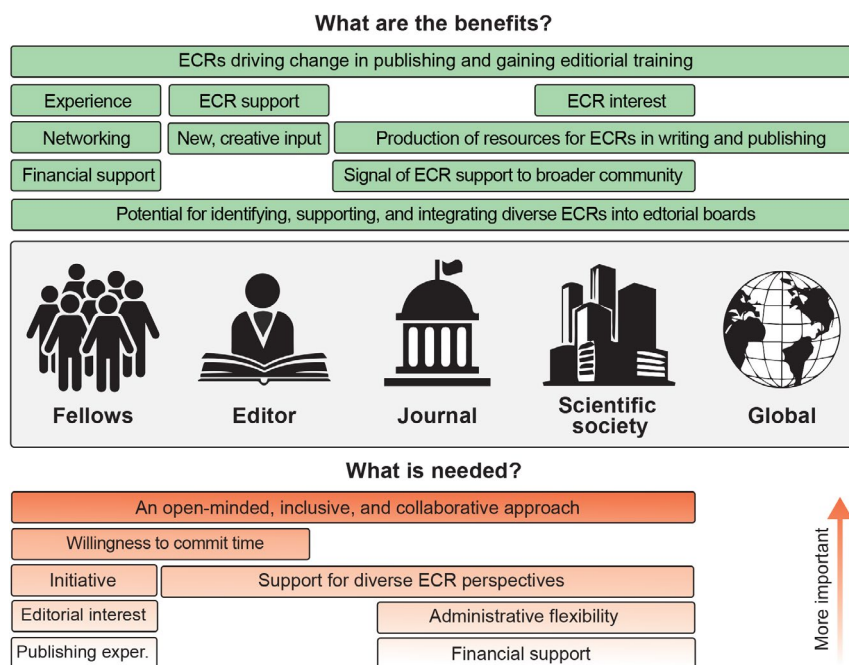


FIGURE 1 The benefits (green bars on top) and requirements (red bars below) of a two-way early-career editorial fellowship program. Groups that contribute to or benefit from the program are pictured in five categories in the centre of the panel. Here, society refers to a professional society. Horizontal bars overlap the groups that are impacted by the requirement or benefit. In the bottom panel, needs are loosely ranked from least (lighter shading) to most (darker shading) important

during a discussion with the EIC at an annual publishing strategy meeting. The honour was created to address two needs for the journal identified by the EIC: increasing submissions to a still relatively new journal, and increasing the geographical and topical diversity of submissions. It also addressed a need that the Fellows identified: making open access publication more accessible to financially limited ECRs. Fellows developed a rubric to score applications based on criteria they deemed most important: (1) scientific novelty and interest, (2) potential to support under-represented groups (broadly defined), (3) journal fit and (4) financial need. Beyond the benefits to awarded researchers, the program provided an opportunity for Fellows to think like editors by considering research beyond their own expertise, making difficult decisions, and providing feedback on manuscripts ahead of submission.

WHAT IS NEEDED TO CREATE AN IMPACTFUL EDITORIAL FELLOWSHIP?

While there are likely many ways to support ECRs through editorial training, we consider the collaborative, two-way model of the RCEF to be the most crucial key to its success (Figure 1). By providing a supportive framework for ECRs to pursue the aspects of the editorial process they find most compelling, the program and its beneficiaries can best capitalise on the strengths of each Fellow. However, this framework cannot succeed

without initiative from the Fellows and a willingness to commit time to the program from both the Fellows and EIC. Beyond the Fellows, it is also crucial that the EIC, journal, publishing partner and scientific society (if applicable) actively support diverse ECR perspectives. For the RCEF, this higher level support is shown by inviting Fellows to strategy meetings, the EIC seeking Fellow opinions on editorial and journal policy decisions, and by listening when a Fellow gives feedback or makes a suggestion. In addition to the two-way model, we consider the creation and maintenance of an inclusive environment with a goal of broadening participation at every turn to be fundamental to the success of any fellowship program. By prioritising diversity and inclusion, an editorial fellowship can help journals keep pace with the increasingly global, connected state of academic research while also giving an important platform to historically excluded voices.

Institutional support at the society and/or publisher level is also important to any fellowship (Figure 1). For the RCEF, the society (ASLO) supports the program financially (e.g. stipends, travel support, fee waivers), publicly via formal acknowledgements (e.g. society-wide correspondences) and professionally (e.g. including Fellows in strategy meetings). The publishing partner, Wiley, supports the program by providing Fellows with key resources for project coordination (e.g. technical assistance for workshop development). It is important to note that financial support is only one aspect of fellowship support and in our view, it is not the most important aspect (Figure 1). An editorial

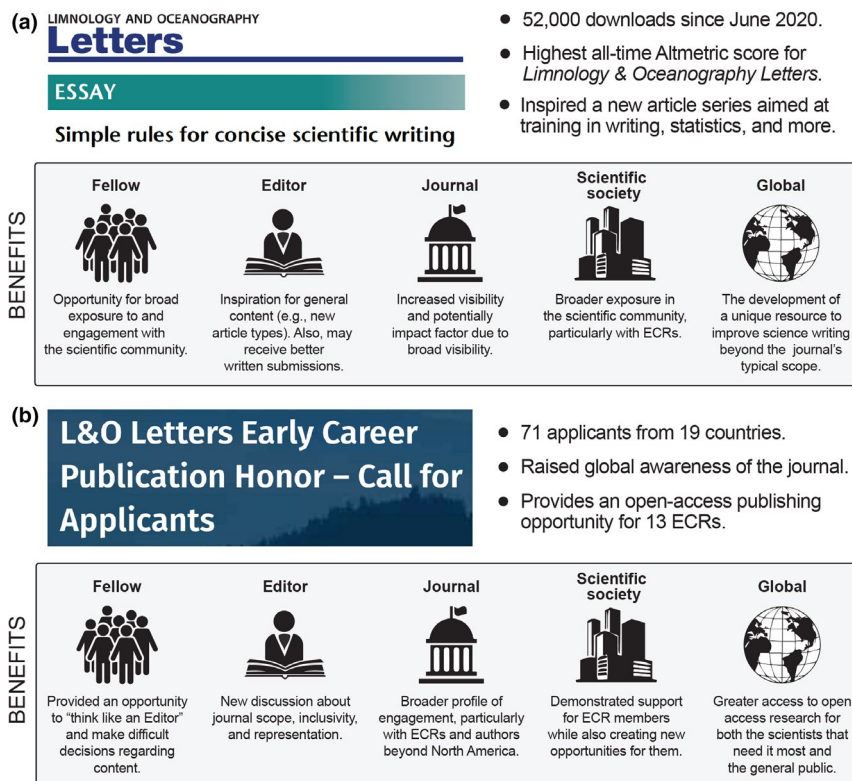


FIGURE 2 Two case studies of outputs from the RCEF that highlight the benefits of a two-way fellowship model, where Fellows have the space and support to develop their own initiatives. (a) An essay devoted to concise scientific writing (Hotaling, 2020). (b) A publication honour to support ECR research. Both initiatives were conceived and executed by Fellows with support from multiple levels of the publishing enterprise

fellowship program can be implemented with modest resources as long as the most important factor—an engaged advocate in a senior editorial position (ideally an EIC)—is willing to commit time and energy to the program. Collectively, multifaceted support from the society, publisher and EIC shows the Fellows that their efforts are valued. This, in turn, raises the calibre of future applicants who see the commitment being made to Fellows and encourages the Fellows to aim high with their fellowship goals.

A SUCCESSFUL EDITORIAL FELLOWSHIP IS MORE THAN NUMBERS

Perhaps the most difficult aspect of this two-way fellowship model to convey is the personal side; the fun, engaging interactions that broaden horizons and improve the publishing landscape for everyone. This “human side” of the fellowship has been powerful. It has seeded key relationships that we will carry for the rest of our careers and has fundamentally shifted how we collectively view scientific publishing, including the roles of editors, publishers, societies and ECRs in the process. For the Fellows, we have seen first-hand that editors are not antagonists for authors; if anything, they are the authors’ biggest supporters. We Fellows have also gained valuable

professional “community” through interactions with our Wiley partners, editors at other journals, authors and society members. For editors and publishers, the RCEF has provided an eye-opening view into the rich potential for ECRs to influence publishing *now* since ECRs have a keen sense of urgency surrounding key publishing issues (e.g. the movement towards open, reproducible science). From the EIC perspective, we can summarise our views simply: it has been a privilege and joy to collaborate with editorial Fellows. They give us confidence that the future of scientific publication is in terrific hands.

CONCLUSION

In this essay, we described a novel early career editorial fellowship that succeeds through a collaborative, two-way interaction model. We highlighted the potential for editorial fellowships to benefit the scientific community at multiple levels. We advocated for wider implementation of such editorial fellowships to provide key training for ECRs while simultaneously addressing the systemic lack of ECR voices in scientific publishing.

DATA STATEMENT

No data were used to write this article.

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B.R.D. and S.H. wrote the first draft of the manuscript and all authors contributed substantially to revisions. P.A.S. conceived of the essay.

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