
Editorial

Advances in standards and training for journal editors and peer reviewers

DOI: 10.20316/ESE.2018.44.18005

Authors have an increasing range of measurable guidelines, requirements, assessment targets and expectations laid upon from different sources; journals, institutions, and ethics committees. As authors, we know how certain methodological procedures must be performed, we know we must receive approval from an ethics board for patient testing, and for better or worse, we know how many papers we are supposed to publish and the types of journals they should appear in. Yet for journal editors and reviewers, there are no globally recognized structures or measures of expectations or performance.

The multitude of roles associated with journal publishing and the peer review process have long been directed by received wisdom and established methods, passed from one editorial team to another, changing and developing in response to personal preferences, organisational practices or new demands and technical developments.

In recent years there have been steps to create more centralised standards, training and codes of conduct. There are several possible, simultaneous, influences on the recent moves in academic publishing to formalise training and provide certification of competencies for these roles; to professionalise the role and create a visibly structured career path of competency and experience; to distinguish legitimate journals and editors from predatory, deceptive, shell-journal operations, and as an extension of this, to reassure authors that their submissions will receive an appropriately competent and scientifically professional level of service.¹

Since 1997, the Committee on Publication Ethics (COPE), have overseen best practice and provided advice on ethical conduct in the publishing industry along with guidelines for the editorial office, journal editors and peer reviewers. Recently, they have compiled their office and editor codes of conduct into a more compact core practices overview document (<https://publicationethics.org/core-practices>), with a suite of web-based resources. The new format aims to provide better practical tools to reinforce the integrity of publishing operations. These serve as incredibly useful guidelines but are still not formal training frameworks or certifications by which an individual can be assessed.

Recently, there have been moves towards more definitive, structured training programmes developed by scholarly publishing researchers, professionals and organisations. A group led by David Moher, from the Centre for Journalology (<http://www.ohri.ca/journalology/>), is working on a framework of core competencies for editors, publishing a consensus statement outlining 14 core competencies.² These competencies are intended to form a standardized training resource, which gives instruction to editors on the processes, skills and abilities required to oversee a journal.

They create a framework for recruiting editors based on skills and experience, enabling us to certify editors and create a visible certification of skills that will increase trust and transparency in the editorial process, increasing these editors' competencies and effectiveness in their roles, and improving the quality of research published in journals as a result. This framework has been developed in the context of biomedical journals, but the characteristics of editors described have the potential to be transferred across disciplines. The competencies are open for feedback from all disciplines to help develop them as a central resource; EASE Members Karen Shashok and Valerie Materese published a comment on F1000 Research,³ suggesting additional competencies of author editing that could be added to the editor's role to incorporate an element of nurturing authors' writing skills. Despite including an ethics section ("B. Publication ethics and research integrity"), there are no details of the editor's role in overseeing ethical standards of research or publishing conduct (eg data manipulation, data fabrication or plagiarism). These ethics are perhaps referenced within the terms "allegations of misconduct, misbehaviour, or questionable practices". Full details of these are given by COPE in their guidelines, but seem conspicuous by their absence in the proposed minimum set of core competencies framework. It would be beneficial for the framework to incorporate the requirements of a working knowledge of research and publication ethics and competencies in resolving incidents.

It is not just journal editors who need certification. As with the need to develop a training framework for journal editors, there is a need to create new competent reviewers, identify existing skilled reviewers, capture peer review activity and make it visible and useable. The role of peer reviewer is time consuming and has been relatively unrecognised and characterised by a loosely defined set of skills. Though some universities do include peer reviewing sessions, reviewers do not tend to receive any formal training in peer review, beyond the experiences of journal clubs, and many report learning how to review on the job. There are no centrally determined directives or formalised guidelines for reviewing or certification. Lindsay Morton of PLoS recently stated that "only 16% of publishers provide robust reviewer resources and outreach".⁴

EASE have collected together many of these emerging training sources in our Reviewer Toolkit (<http://www.ease.org.uk/publications/peer-reviewer-toolkit/>) to help educate newer reviewers and serve as a repository of tools and innovations for more experienced researchers. *European Science Editing* also published an article recently, in which the availability of online reviewer training⁵ in which Publons Academy (<https://publons.com/community/>

academy/) was identified as the only practical skills course awarding certification for completion. Examples of similar courses are the ACS Reviewer Lab developed by the American Chemical Society (<https://www.acsreviewerlab.org/>) and the Reviewer Training Materials of the BMJ (<https://www.bmj.com/about-bmj/resources-reviewers/training-materials>) both of which are included in our EASE Toolkit for Reviewers.

The need for professionalism and standards in peer review may be influenced by funding body interest and attempts to reduce publication bias.⁶ There is some debate as to whether there are too few peer reviewers to assess the increasing number of submissions in the world,⁷ or whether the pool of all the potential reviewers is under-used; a study in PLoS by Kovanis *et al* in 2016⁸ using data derived from MEDLINE from 1990 to 2015 found that 20% of the researchers performed 69% to 94% of the reviews.

A growing amount of reference material and grey literature exists on these subjects, providing advice and insight, recommending best practice and setting out desires; for example, the many resources and individualised guidelines presented by publishers and organisations, such as the Elsevier Researcher Academy (<https://researcheracademy.elsevier.com/>), Taylor & Francis' Editor Resources blog (<https://editorresources.taylorandfrancisgroup.com/>), and our own EASE toolkits for Reviewers and Editors (<http://www.ease.org.uk/publications/ease-toolkit-journal-editors/>), and *EASE Science Editors' Handbook* (<http://www.ease.org.uk/publications/science-editors-handbook/>).

There are perhaps more training resources available for reviewers than for editors, but these have been disparate and localised, until recently. Formalised courses, recognised certification and a centralised website to draw these qualified reviewers from are developing, from organisations such as European Peer Review Association (<http://www.peer-review-network.eu>), PEERE (<http://www.peere.org/>) and Publons, all of which offer structured practical, accredited, training sessions, with the addition of Publons providing a central platform for reviewer searching and selection.

And finally, from the same group as the core competencies for editors, a paper led by Keti Glonti⁹ of the MiRoR project (Methods in Research on Research), outlines "A scoping review protocol on the roles and tasks of peer reviewers in the manuscript review process in biomedical journals." From this paper, we may expect a similar competency framework for reviewers as with editors, from which we may establish a centralised training process.

In a similar way to the development of reporting guidelines discussed by Joan Marsh in our previous issue's editorial,¹⁰ development of such training programmes should involve journal editors, publishers and industry organisations in the implementation process. What is required now is a cohesive movement on the part of all agencies in the academic publishing world to respond to these increasing demands for training, incorporate these standardised competency frameworks into recruitment

and orientation processes and further strengthen the already growing visibility of professionalism and validation of the skills of our journal communities. The demand for such certification and training is growing, and EASE is an advocate for increasing the skills and resources available to the global journal community, as well as helping establish training programmes and contributing directly to fostering these standards.

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Conflict of Interest

Duncan is involved in the ongoing development of Publons Academy and delivers in-person training sessions to support it.

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