

7 Steps to: Successful Journal Publications

Overview

What are the essential considerations when preparing journal publications and handling editorial feedback? These questions are addressed in this *7 Steps Guide*, which seeks to help early career researchers develop their writing skills and publish work successfully. Quality publications in high impact factor journals are critical when UK higher education institutions (HEIs) are reviewed for research excellence by funding bodies. *So published papers really do matter and will help you get a job!* Alongside publications based on new data, high quality reviews of complex areas or internationally topical subjects represent valuable opportunities for early career researchers (Walsh *et al.*, 2009).

Writing is a key part of the research process. A guiding principle is to consider the issue of publication as early as possible. Selecting a suitable journal is paramount, taking into account the audience, the journal's impact factor and, of increasing importance, whether it is open access (freely available). Judging journal quality can be challenging for early career researchers. A journal's impact factor (IF) reflects the average number of citations for the featured papers. Journals with higher IFs are often deemed more important than those with lower IFs. However, the use and importance of IF, and other metrics, varies between disciplines, so take advice from colleagues.

Historically, most journals run by large publishing companies only allowed readers to access published papers where their university paid a subscription. More recently several models of 'open access' (OA) publication have been applied. Where possible, publication in high quality open access journals should be the goal, since these generate more citations than non-open access (NOA) journals (Hajjem *et al.*, 2005). Do be wary, however, of predatory publishers (Beall, 2014).

1. Recognise the importance of journal publications in research

Academics need to share their research with peers from associated fields, students and other interested groups. To this end, the first peer-reviewed journal (*Philosophical Transactions of the Royal Society*) started in 1665. Since then, thousands of papers have been published in a vast array of journals. It is recognized that research has progressed through three ages: the individual; the institutional; and the national, where nations competed to be leading economic or military powers via the application of knowledge (Adams, 2013). Adams' analysis of journal publications from 1981-2011 indicates that we are now in the "4th age of research", whereby the best papers emerge from international collaboration. Journal publications inform policy decisions in all spheres of society, from public health to the justice system, and economic policy to the environment.

2. Understand the Research Excellence Framework (REF)

The 2014 Research Excellence Framework assessed research activity in UK HEIs to help decide the allocation of funding from 2015 onwards ('REF2014' <http://www.ref.ac.uk/>). The exercise provided accountability for public investment in research and evidence of the benefits, as well as producing benchmark information to compare research capabilities between HEIs. An evaluation of the journal papers authored by employees at each HEI was a major element of REF2014, with a similar approach anticipated for REF2020. All researchers should think about how their planned publications may contribute to the next REF, considering, in particular, their originality, rigour and significance. REF2020 will also require submitted publications to be available via open access, so this needs to be built into dissemination plans.

3. Identify the best journal to publish in

Where to publish depends on the originality, rigour and significance of your findings. Higher quality journals expect truly innovative work. Research must also be conducted rigorously, including all analyses. Working with your collaborators or supervisor, carefully identify candidate journals in your area (Lawton 1992) and compare your work with papers that were accepted for publication. To learn where colleagues are submitting manuscripts attend journal clubs and departmental research seminars (Day, 1998; Walsh *et al.*, 2009). Within the same field, journals differ in scope, preferred writing style and length/structure requirements. Familiarise yourself with the target journal's specifications before finalizing the manuscript, and preferably before writing begins. In disciplines where impact factor is less significant, scrutinise the editorial board or use a journal ranking to judge the quality of different journals. Where turnaround time is important, colleagues who have published in a journal, or reviewed for it, may know the typical time from submission to publication. If open access publication is unaffordable or unavailable use the University repository (<http://pearl.plymouth.ac.uk/>) to make papers available, as soon as the embargo period allows.

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4. Prepare your manuscript for submission – some key points

Writing approaches differ between individuals; some like to write occasionally, for short periods, others prefer sustained bouts. It may be helpful to go somewhere quiet to write, or to attend a 'writing retreat' with others. Many suggestions to assist writing are available, e.g. Kotur (2002), Silvia (2007). Whilst all sections of a paper are important, the title and abstract are selling points and must capture the reader's attention. Koopman (1997) offers specific advice here. Excellent guidance on writing interesting manuscripts, that engage journal editors and referees, is provided by Sand-Jensen (2007) and Walsh et al (2009), who explain the importance of a detailed covering letter. Where appropriate, make use of figures and tables, taking into account copyright (Sand-Jensen, 2007). Finally, think about the responsibilities of authorship, including disclosure of conflicts of interest (Mowatt et al., 2002; Kaufmann et al., 2010). The order of authors on a paper can be contentious, so reach agreement early to avoid problems later.

5. Avoid fabrication, falsification & plagiarism

Fabrication of findings, improper analyses, and incorrect citation are all threats to the integrity of research (Kohn, 1986; Martinson et al., 2005). If identified post-publication, errors can be harmful to researchers' careers. Consequently, co-authors must discuss openly all original data and analyses. Correct citation can be facilitated by using reference management programs (Muldrow & Yoder, 2009). These reduce workload, lessen the chance of errors, and can automatically format references in the style of a given journal. Citations can be added any time during the writing process, but sometimes it is helpful to write "(ref)" after a statement or discussion of previous findings, filling in the details later. This approach allows you to capture a flow of ideas, even if all references are not to hand.

6. Deal with referees' comments with minimal pain

Many journals receive huge numbers of manuscripts. Should your submission be sent for review you will normally wait at least four to six weeks for comments. The typical options available to reviewers are: 1. Rejection, meaning you must submit elsewhere. Generally speaking, appeals are inadvisable; they may aggravate editors and are unlikely to change the decision. 2. Major revision, whereby lots of changes are required (this is a common event for most researchers). 3. Minor revision, whereby only small changes are required. 4. Acceptance. Where reviewers' comments seem harsh, don't take them personally and remain courteous in all replies (Oxman et al., 2004; Walsh et al., 2009). If reviewers do not appear to understand some aspect, consider this as an opportunity to clarify your points. Systematically address all comments prior to resubmission. Encouragingly for early-career researchers, successful scientists with the highest number of publications also suffered the largest proportion of rejections (Cassey and Blackburn, 2004).

7. Publicise your work and engage successfully with the media

Research findings are enthusiastically covered in the media - think of reports into stem cells or climate change. UK research councils and other funders now ask academics to heighten public understanding by engaging with the media, as well as policy-makers, practitioners and other research users (Agre & Leshner, 2010; Varner, 2014). Failure to do so may reduce the chances of future funding. Many research councils require bidders to submit a 'pathways to impact plan' alongside grant applications, and some fund project-specific public engagement activities. Once accepted in a peer-reviewed journal, there is an important opportunity to engage with the media to promote the wider relevance of your work. Make sure your home page includes your latest work; sign up to the university's experts' directory; and offer to give presentations to publicise your work. Always contact the University Press Office if you are planning to engage with the media and ensure that your plans are consistent with any ethical principles or copyright requirements. Finally, keep in mind the power of social media (e.g. Facebook, Twitter) for promoting your published research.

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