Top Tips from the Production Team

How to turn your PhD thesis into an article for a GSL journal

We asked some of our journal and book Editors, experienced authors and recent winners of GSL journal Early Career awards for some advice to give to young researchers who want to turn their PhD theses into journal articles. We’ve condensed these pearls of wisdom into 10 Top Tips.

1. Timing

Almost everybody said write one or two papers while you are doing your PhD – don’t wait until it is all over. For those with complex experimental topics, where the results only come together at the end, this may not be an option. For most people, however, writing papers during the research process in place of thesis chapters is the most painless and efficient method of publishing the work and, for an academic career, is probably essential. Many universities now require their PhD candidates to publish papers in peer-reviewed journals in order to achieve the title, but this may vary by country. In Norway, for example, PhDs have to write three papers of ‘publishable quality’ to get their degree. This can mean that when you come to submit your thesis, you may have one paper that has been accepted for publication, one in review and one soon to be submitted. If you end up with a number of published papers in place of thesis chapters, discuss with your supervisor and check your university’s regulations when you incorporate these with your introductory and conclusion chapters to create your final thesis because you may be required to use the accepted version of your paper rather than the finished typeset version produced during the publication process. Assuming that you do manage to get a paper or two accepted for publication in a peer-reviewed journal before you finish your thesis, you will know that those sections of your work are sound and watertight. You will have proved that you can produce work to a publishable standard, impressed the examiner and probably eased your way into the job market.

2. Be concise

Your thesis might be very lengthy. When it comes to writing an article for one of our journals, you will have to cut your thesis to the bone and get rid of all those lovely sample, outcrop or fieldwork descriptions that are no longer essential for conveying your message. Look at the word limit for a paper in your target journal (GSL journals don’t have an exact word limit but recommend the final paper should be a maximum of 12 printed pages, about 7000 words) and pick out just the ‘sparky’ bits of your thesis. It may take you some time to recover from sacrificing large bits of the work that you’ve sweated over for months and years, but rest assured, a better product will result. Leaving things out is something that people find the most difficult, but it’s essential for producing a focused piece of work that tells a coherent story. The cutting and reorganizing can often result in a complete rethinking of the work you’ve done to date, which is helpful in itself. Don’t try to trim your 50-page thesis chapters down to publishable lengths; it is much more efficient just to start again. As you re-evaluate your work, you may see limitations, mistakes and arguable assumptions that were never apparent before when you were too deep into your...
topic and intent on finishing the thesis. Plan for two or three papers to come out of your work and don’t feel that you have to try and shoe horn it all into just one publication.

Writing a paper for one of our journals means putting things concisely and presenting information in a scientific way. It’s an art and will help in marshalling your thoughts and setting out clear aims and objectives and will never be a wasted effort.

3. Who is your target audience?

Is your work worth publishing in the first place? Has your paper enough new ideas and data to make people want to read it and journals want to publish it? Why not try out your selected material as a conference presentation to gauge interest and see how it goes down. In a thesis there are few constraints on what you can put in. Your paper, on the other hand, needs to be something that a large part of the community will want to read. It needs to be interesting, short, clearly expressed and tell a story.

Your target readers should be the broad community working on similar problems elsewhere in the world. Write your manuscript clearly, using basic terminology that most geologists will understand, wherever they are based. Avoid jargon and unexplained acronyms and keep to a simple style. Don’t make the mistake of writing your paper for that one expert who has worked a lot on your outcrops and authored fundamental papers in your area and research field.

Decide on your target journal as early as possible. The Geological Society publishes six journals: Journal of the Geological Society and Quarterly Journal of Engineering Geology and Hydrogeology are our own journals; Geochemistry: Exploration, Environment, Analysis and Petroleum Geoscience are co-owned journals; and Scottish Journal of Geology and Proceedings of the Yorkshire Geological Society we publish for other societies. Your choice of journal will constrain the style, length and structure of your paper, the number of figures you can include and so on. Look at the journal website and read the scope and aims of the journal (e.g. www.geolsoc.org.uk/jgs_authorinfo). If you know these things before you start writing, you can plan how to fit your study into the format of a paper for your target journal right from the outset.

4. Structure

One of the hardest parts in writing your first paper is knowing where to start. Talk to people other than your supervisors about the main conclusions of your research. After you’ve done this, pick out three or more conclusions that highlight the importance and novelty of your work in the field. Identify the figures/illustrations needed to demonstrate these conclusions. Working backwards from the key conclusions, structure your paper, bearing in mind the format required by your target journal. Each conclusion should have a supporting discussion and those discussion points should be supported by relevant results from your research. Those results must have the associated methods described in sufficient detail that someone else could reasonably reproduce the work. The introduction must explain the context and motivations that led to the key conclusions. It also needs a ‘hook’ to pull people in to read the paper – this will be the scientific question that you intend to answer in the conclusions. Throughout all this you must remember to be concise (see point 2)!
Tell just one simple story and make sure it answers one important question to which readers want to know the answer. Make this question evident in the title and introduction, state clearly in the text why it matters, what you intend to do about it and what your results imply. The structure of the manuscript should have a clear logic and narrative – it doesn’t matter if the work was not done in the order related in the paper or, in fact, with the motivations described. The Abstract is really important so make sure that it concentrates on the essential information in your paper. It will be freely available to all when your article is published so it will be read many more times than the complete paper.

5. Formatting and referencing

Look at previous papers published in your target journal. Read the instructions to authors for the journal, where you’ll be told what sections are required, the length of the abstract, how the citations and references should look (www.geolsoc.org.uk/qjegh-authorinfo). It’s important that you cite references correctly for your target journal. Each reference should have a citation in the text, and each citation should have an accompanying reference. If your referencing is sloppy or out of style, some reviewers may think this lack of care will reflect the content of your paper. Your journal article will have fewer references because of space constraints. Ensure these are relevant and recent and update them if some time has passed between finishing your research and writing your article.

6. Artwork

Research in the Earth Sciences always needs you to draw things. Home and Student Editions of various graphics packages should be affordable, e.g. CorelDRAW!. Using the right lettering, line thicknesses and colours is a skill worth developing for both your papers and your thesis. Our guidelines will help you design illustrations that will reproduce well online and in print (Figure guidelines). Include clear figures that explain themselves and point out what is important in your text and, if possible, include a figure at the end of your paper that summarizes the entire article. If relevant to your subject, take lots of photographs.

7. Other papers and helpful sources

Before you write up your own research into a paper, read as many others as you can, especially those published in your target journal. Learn from them what works and what doesn’t. There are many books and articles available that offer really helpful advice. Two articles that one of our contributors often recommends to students are ‘The art of writing science’ by Kevin Plaxco (https://doi.org/10.1002/pro.514) and ‘How to write paragraphs in research texts’ by Patrick Dunleavy (http://blogs.lse.ac.uk/writingforresearch/2017/07/17/how-to-write-paragraphs-in-research-texts-articles-books-and-phds/).

If English is not your native language, ask English-speaking colleagues if they could read your paper and feed back to you. The European Association of Science Editors (EASE) has a very useful guide available in 26 languages (www.ease.org.uk/publications/author-guidelines) and check out other useful links on the GSL website (www.geolsoc.org.uk/LinksForAuthors).
8. Contributing authors, copyright and Open Access

Ensure that you know who is to be listed as an author of your journal article before you start. When you submit your paper to one of our journals the submission process will walk you through listing the contributors and defining everyone’s contribution. Your supervisor (who may be the person who expended all the effort to get your grant) will probably want their name listed first, but everyone will know that you did the work!

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9. The review stage

One of the main benefits of submitting an article to a journal, while still working on your PhD, arises from the constructive feedback that results from the reviewing stage. This can help guide your project and avoid difficult questions at the viva/thesis exam stage. Reviews will often raise points that the student and supervisors had not thought of. This stage of the publication process is like a mini-viva and is an excellent exercise in itself.

10. Don’t get disheartened

Finally, don’t get disheartened!

If you’re writing your paper after finishing your thesis, be prepared to re-evaluate the work and accept that it may not have been as perfect as you thought when you handed in the thesis. The paper you are writing now is your chance to fix, change and ultimately improve the job that took you years.

If you’ve written and successfully published several papers while doing your research but never got around to writing up the thesis, you will still have those papers and they can now go towards a PhD by publication.

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Good luck and thanks to all our Editors and authors for time spent considering this topic!

Useful links to our journals

[www.geolsoc.org.uk/jgs_authorinfo](http://www.geolsoc.org.uk/jgs_authorinfo)

[www.geolsoc.org.uk/qjegh_authorinfo](http://www.geolsoc.org.uk/qjegh_authorinfo)

[www.geolsoc.org.uk/geea_authorinfo](http://www.geolsoc.org.uk/geea_authorinfo)

[www.geolsoc.org.uk/pg_authorinfo](http://www.geolsoc.org.uk/pg_authorinfo)

[www.geolsoc.org.uk/pygs-authorinfo](http://www.geolsoc.org.uk/pygs-authorinfo)

[www.geolsoc.org.uk/sjg-authorinfo](http://www.geolsoc.org.uk/sjg-authorinfo)

Best wishes  
The Production Team