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Editorial

Approaching academic writing as a medical student; tips and tricks.

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Introduction

Academic writing is a foreign concept for most medical students, particularly early in their studies. It is daunting for those who are not familiar with the writing style in particular those who have not actually written in that fashion before. Consequently, when compared to the types of essays that are required in Medical School, the construction and write-up of research or reviews for academic journals appears to be an insurmountable task. As a result, it is easy to feel overwhelmed and to be left not knowing where to start.

A piece of scientific writing is precisely conceived, structured according to scientific method and generally aims to be both factual and concise. In this way it should communicate complex scientific information in a fashion that is broadly, universally understood. Having now passed through medical school, both writing numerous essays and importantly reading scientific literature, students are better prepared for this than they would believe. This article aims to further demystify academic writing for beginners and give some tips and tricks for tackling the process.

What does it involve?

How to approach a paper/article; tips and tricks

As with any complex task - in this case the process of writing – breaking it down into bitesize chunks makes each stage feel like an achievable goal. This helps to make you feel like you're making progress through
a checklist. To begin with, reading around the subject is vital. This forms a solid foundation of knowledge for what you plan to write about, and it will spark ideas. Furthermore, experience of reading scientific literature of any type and critiquing it will help you better understand how to write in an appropriate fashion.

Once the process of information-gathering is complete, the next step is to generate a plan as to how to structure the paper. Structure in scientific writing is paramount. This stage can feel a little tedious but is perhaps the most important part of ensuring readability, flow and conciseness. Allotting time to planning at the very beginning of the process, while time-consuming, will speed things up in the long run. For a research paper the structure is pre-determined and makes this part of the process a lot faster. Generally, a scientific manuscript is divided into Abstract, Introduction, Methods, Results, Discussion and Conclusion – although this can vary somewhat between journals and so it is clearly wise to follow journal-specific instructions. At this stage, it also helps to set a word count estimate for each section - suggested word counts can be found on the journal submission page.

After formulating a structure, a useful next step is to generate content of a manuscript by developing "overview bullet points". These can help to break down the information into manageable chunks which can then be tackled one at a time.

Following the completion of each section and the conclusion, then write the introduction which should lay out the motivation for the work and summarise the structure for the readers. Finally the abstract should be written last to complete the paper. It should summarise the key findings, and be easily read and understood as a stand-alone section.[1]

It is vital to thoroughly proofread any manuscript, as you will be familiar with for all your essays! A helpful strategy may be to read the words out loud to force yourself to pay attention to meaning, spelling and grammar. Whatever technique you adopt, this hopefully will allow mistakes not to slip through the cracks.

The last task is referencing. Referencing is critical - it allows the writer to give context, provide a source of reliable evidence that sits as the foundation of your work, and to give the reader the ability to access directly all primary sources of information to verify for themselves. Always read such sources thoroughly and try to reference as you go. Where possible use up to date references in order to make your writing as current as possible. Different journals have different referencing guidelines, so also make sure to check which one is required for the journal to which you are planning to submit. There are several programmes available to automate the process[2]. Two of the most popular are Mendeley and Endnote; with others including Zotero and Refworks. Find which works for you - they will save you an enormous amount of time.

What is so daunting and what to do about it?

Mental block

This is an issue with almost all forms of writing – which means luckily there are tried and tested methods to get out of it. If you're struggling to get started and to get words written down try recording yourself speaking about ideas for the section that is proving difficult, and then playing it back and typing it up (in a more refined format).

Another suggestion is to save some quick and easy tasks for the paper for times when it all feels a bit sluggish. It can help to tick off jobs such as formatting the article according to the guidelines of the journal and creating the title page. These tasks help to serve as a break from the thinking whilst still making progress.

Finally, give yourself a break. Either take some time to focus on something completely different from writing, or maybe just turn your attention to a different section of the paper. When you come back to it later, it will likely seem a little easier to circumvent the mental block.

Sending drafts for comments

When writing with an expert in their field or someone that knows more than you, there can seem to be a lot of pressure to achieve perfection on the first try. Remember, we are always learning from those more experienced than us! You often cannot see your own faults - it is only natural to need another pair of eyes to see what you cannot and to get another's perspective that otherwise you wouldn't have.

Make sure it's been formatted, referenced and inished as best you can: In order to get the most out of colleagues' comments it is important to send them a polished version. This will ensure that the feedback you receive relates to the content of the article and not its appearance. If a piece of work looks obviously like a draft, do not send it to someone to review.

Don't take comments/criticism personally: Feedback, whether positive or negative, is inevitable in the process of improving work. It is important to keep in mind that a first draft (or indeed, any draft) will not be a finished product, and any criticism from reviewers is merely assistance in creating a finished product. Nevertheless, at all stages it is important to try your best.

Timeline: Make sure to work with timeline, either self-imposed or agreed by those involved. Ensure that the date chosen is well in advance of the final deadline as there may be repeated drafts. This will afford greater flexibility given the fact that the other people involved will have busy lives too.

Submission

After writing, referencing, and receiving feedback from your co-authors, it's time to submit. Going through the stages of submitting to a journal is simple but may be time-consuming. Check the journals guidelines for what they require. You may need an abstract or a covering letter, the authors names, affiliations and emails. Journals will often require figures to be submitted as separate files. The discussion of authorships can be contentious and should be had well in advance to avoid last minute tears. It is critical to pre-agree with your colleagues the order that you will be named on the paper and also who should be involved. Furthermore, all authors should have sight of the final draft of the manuscript.

Next, go to their website (you will need to create an account) and click through their submission pages – a multi-step process which is (or should be) very self-explanatory. After clicking submit, you will receive email confirmation of the submission, and all you have to do is wait for the acceptance, rejection, or suggested revision email that will follow.

Rejection

Having an article rejected can feel like a setback, but it doesn't necessarily have to be one. Rejection is a natural part of the process and doesn't mean that the paper is a total failure. One can think of rejection as an indicator that something needs improving; don't give up! Often a rejection will come with feedback. A journal may feel that it isn't the type of manuscript that they would publish, but perhaps a different journal would accept it. Alternatively, there may just be revisions that they suggest to you before resubmitting. In this situation, you can choose what to make of it. You don't have to give up straight away. Consider any rewrites suggested or have a look yourself to see what could be improved. Then perhaps resubmitting to a different journal.

How to get involved?

Becoming involved is much easier than you think – it just requires enthusiasm and the courage to ask! When on placement, or with tutors, ask if there is anything to get involved in. Always make sure you actually have enough time to devote to the project and that you are willing to see the process through. There are projects going on in all aspects of medicine that could always do with eager helpers to speed things along. It helps to pick something you have a genuine interest in, otherwise your enthusiasm will likely dwindle rapidly. The range of things to be a part of is vast, so think beforehand about which area is most appealing...

Conclusion

Academic writing feels daunting and once you start there will be a steep learning curve for students who have never been involved before. Taking the first step - just asking to get involved - is a huge hurdle, and really can be a beneficial addition to your clinical medicine studies. Approach it step by step with the simple tips in this article will hopefully get the ball rolling and help to demystify the world of academic writing.

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