

How to write a paper in six easy steps

by

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1. Do research and get data. Repeat the research and get more data. Compare data. Make sure there are no errors. Take more data and re-check reproducibility.

2. Choose a single take-home point of the paper. Imagine that you are explaining the paper to someone after it is written and published. What would you say to them during a quick meeting? This should be your take-home message.

3. Draw a maximum of five graphs of data with the last graph being related to the take-home message. A cartoon may be necessary and this should be considered one of your five graphs. To avoid later pain in production of the paper, look at the journal web site and make the graphs according to their style parameters.

4. If this is your first paper then review how others have written theirs. This depends strongly on the journal, however, many have five sections: Abstract, Introduction, Experiment, Results and Discussion and Conclusion. The Conclusion section is the conclusion to the paper not a set of conclusions, there is a difference. The conclusion should not be a re-iteration of the abstract and should reflect the end of the paper and state your take-home message. Decide on a general plan of attack in what each section will contain. Use your figures as an outline for the Results and Discussion section.

5. Now start. This is the hardest part. To begin getting into the 'mood' write the experimental section first. You should know all about this and it will get you writing. Then try writing the Introduction section, again this should be fairly easy. Look at others' Introductions, as well as the journal style, to get a feel for how to write this section. The introduction should state why you are doing this work based on others' work. Next, with your figures in hand, write the Results and Discussion section. This will take a while and you must be concise. We are **all** very proud of **all** the data we have taken, however, don't put a lot of extraneous information in the paper. You will be surprised how your ideas will change during the writing of this section. Don't worry, writing something down clarifies your thoughts and may even modify your take-home message. Now write your Conclusion section with your take-home message in it. This should be a concise section and may include comparison to others' work and how your take-home message agrees/disagrees with their main conclusion.

6. Now write the Abstract. This is all important since many people only read this section, especially if they are not exactly in your field of research. There should be an introductory sentence, a body describing your main results and a concluding statement with your take-home message.

Final statement – Make sure there are no spelling or grammar mistakes in your paper and ensure that the references are given in the journal style when you are ready to submit your paper. Nothing makes a referee less happy than trying to correct spelling/grammar and editors get upset when the references are in an incorrect style. It is best to have everyone happy and let them concentrate on your beautiful data and take-home message.