Yale NUS College | WRITERS' CENTRE

**SCIENCE WRITING**
**Tips for writing a Methods Section**
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1. Keep a notebook! (Even before you begin experimental work)

    Keeping good notes about your methods, how they change, and limitations that arise as you conduct research is the first step to writing a good methods section that can be re-written or edited most accurately. Being meticulous and reflective about the experimental techniques that eventually give you the results is great research practice, and helps you refine the hypothesis and research argument overall.

2. Ask yourself how your methods are related to or a product of the work that preceded you.

    Your literature review should have given you good examples and reason as to why you decided to use the experimental techniques you did. In the opening of your methods section, you may wish to explain your techniques in relation to what others have done before you and the rationale for that (if you are building on to previous experiments, explain how your method is improved, or seeking results that are complementary using a technique that previously was effective).

3. Ask yourself what makes your method different or specific to your argument and goal?

    Your research should be specific and slightly different from what has been done before. In addition to thinking of how your methods come from the work others have done, use the methods section to reinforce the results or hypothesis you are trying to test for. In addition to broad comments on the specificity of method, you may also want to check that you have written about the systematicity of your methods which may include number of trials, repetitions, pilot studies, and more.

4. Include experimental controls

    The methods section should include your controls, which are an essential part of an experimental design. You need not explicitly write about controls, but it should be clear in your description or explanation of experimental techniques as to where and how you are controlling key variables and aspects of the experiment to ensure consistency. If you fail to find proper controls for some of the aspects of your experiment, than this will necessitate a revision of your experimental plan.

5. Think about experimental design limitations

    You do not have to outline all the limitations of your experiments in this section, but it could be useful to signpost and signal toward the final discussion section the key areas of concern that emerge from your methods. Reflecting on limitations might be useful to show reflection in your methods section, and to point out other areas where there may be confounding elements. These limitations usually then serve as a good segue into the results and discussion section.