Writing a Discussion Section

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Writing a discussion section is where you really begin to add your interpretations to the work.

In this critical part of the research paper, you start the process of explaining any links and correlations apparent in your data.

If you left few interesting leads and open questions in the results section, the discussion is simply a matter of building upon those and expanding them.

The Difficulties of Writing a Discussion Section

In an ideal world, you could simply reject your null hypothesis [1] or alternative hypotheses [2] according to the significance levels found by the statistics.

That is the main point of your discussion section, but the process is usually a lot more complex than that. It is rarely clear-cut, and you will need to interpret your findings.

For example, one of your graphs may show a distinct trend, but not enough to reach an acceptable significance level.

Remember that no significance [3] is not the same as no difference, and you can begin to explain this in your discussion section.
Whilst your results may not be enough to reject the null hypothesis [1], they may show a trend that later researchers may wish to explore, perhaps by refining the experiment [4].

Self-Criticism at the Heart of Writing a Discussion Section

For this purpose, you should criticize the experiment, and be honest about whether your design [5] was good enough. If not, suggest any modifications and improvements that could be made to the design.

Maybe the reason that you did not find a significant correlation is because your sampling was not random [6], or you did not use sensitive enough equipment.

The discussion section is not always about what you found, but what you did not find, and how you deal with that. Stating that the results are inconclusive is the easy way out, and you must always try to pick out something of value.

Using the Discussion Section to Expand Knowledge

You should always put your findings into the context of the previous research that you found during your literature review [7]. Do your results agree or disagree with previous research?

Do the results of the previous research help you to interpret your own findings? If your results are very different, why? Either you have uncovered something new, or you may have made a major flaw with the design of the experiment [8].

Finally, after saying all of this, you can make a statement about whether the experiment has contributed to knowledge in the field, or not.

Unless you made so many errors that the results are completely unreliable, you will; certainly have learned something. Try not to be too broad in your generalizations [9] to the wider world - it is a small experiment and is unlikely to change the world.

Once writing the discussion section is complete, you can move onto the next stage, wrapping up the paper with a focused conclusion [10].

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