

Supplemental Material S4. Paper sketch outline for manuscript writing.

This template serves as a guide for drafting your manuscript. The order represents the section in the order that they appear in a standard scientific manuscript. This does not necessarily represent the order to which they are written. The numbers in the corner reflect a common sequence of manuscript construction.

Abstract should include the following components:	5
<p>Purpose: Summarize the article Tell a story that states the problem being addressed State the significance</p> <p>Methods: Briefly describe participant pool, study design, and data collected</p> <p>Results: Reveal most valuable findings/results and any significance identified</p> <p>Conclusions: Use strong verbs: argues, demonstrates, shows https://www.editage.com/all-about-publication/research/impressive-Verbs-to-use-in-your-Research-Paper.html Include relevant keywords</p>	
Introduction:	1-6
<p>The Introduction section of a manuscript provides the rationale for the proposed research. This section includes the following components:</p> <ol style="list-style-type: none"> 1) Initial paragraph that summarizes the Introduction section. 2) Literature Review <p>A review of the current literature allows the reader to enter the scholarly conversation. The Introduction section tells a story about what researchers have already done to answer the research question, what answers have been obtained, what information is still needed to answer the question (the why you are doing this work to bring more knowledge to the community of interest. Not just a listing of facts but why does current state of knowledge leave us still asking questions. This frames the “gap in knowledge” that is proposed for the research described in the Methods section.</p> <p>This section should be just long enough to frame the problem but not an exhaustive literature review.</p> <p>3) <i>Justification paragraph</i></p> <p><i>This section serves as the closing paragraph of your literature review.</i> How does this literature inform your current research questions that address the stated problem? What are your hypotheses to be tested based on the gap you identified in the literature? How will this research move us one step forward in understanding more about a specific topic?</p> <p>This section you will write by beginning with your literature review. You will continue to refine this section as you finalize your manuscript. Don’t get stuck here. This section may undergo several revisions throughout the writing of the manuscript. You will write it first to frame the structure of the manuscript and to inform your hypotheses. You will revise it at the end to create a cohesive document from introduction to conclusion.</p>	

Methods:	2
<p>This section includes a clear description on how you conducted the research study. It should be written in enough detail that another researcher could replicate the study. If the study is reproducible then another researcher should be able to use your methods section (like a clear recipe) to repeat the same study to test if they get the same or different outcome.</p> <p>Includes:</p> <p>The research design (single subject, between subjects, within subject, etc.)</p> <p>Information about participants (Inclusion/exclusion criteria, demographics collected, i.e. gender, age, cultural identity etc.)</p> <p>Materials, equipment (name and model), stimulus items and how the data was collected with citations to support previously established methodology.</p> <p>How the data is to be analyzed (quantitative, qualitative, mixed-method). Description of statistical method for analysis.</p>	
Results:	3
<p>Report the results of your data analysis. You are not interpreting what it means at this point but what you found out when you did the test or collected qualitative responses. This section is written in a scientific manner that should be consistent with other published descriptions of results that were analyzed in a similar manner. The term “significance” should only be used if statistical significance was established through statistical data analyses.</p>	
Discussion:	4
<p>Briefly reminds the reader of the problem addressed (the why you did this study) and the proposed hypotheses.</p> <p>Summarizes the numbers you reported in the result section and why they support or do not support your hypothesis. If the results didn’t support the initial study hypotheses, discuss what surprises you discovered while doing this research. Discuss why you think the findings were supported or were not supported. Identify strengths and limitations.</p> <p>Strengths:</p> <p>What went well and should be repeated?</p> <p>Why the finding(s) support a new method or a new way of thinking?</p> <p><i>Limitations:</i></p> <p>What kept you from understanding something?</p> <p>What would you do differently?</p> <p>Unforeseen problems or challenges</p> <p>Future Work</p> <p>How will you use these findings in the future to inform your research?</p> <p>What is your next step?</p> <p>What research questions do you have now?</p>	
Conclusions:	5
<p>Wrap up the manuscript with a summary paragraph that restates the value of the research described and the contribution that the research makes to the discipline or population studied.</p>	
Acknowledgements	7

This section is used to recognize contributions to the project. You will answer the following questions in your acknowledgements:

- Was this research supported by any grant funds? You will need to ask your research mentor if you are unsure. Authors describing research findings that were obtained with grant funding are required to acknowledge the funding source and award number. Your mentor will have this information.
- Who gave you equipment or facility space to conduct the research?
- Who helped you with this research that is not an author (a lab, students, a school)? Thanks to participants may also be included here.
- Did anyone help you edit the paper?

You can write this section at any time during your drafting but you may choose to do it last or at least review it again to make sure you have include everyone.