Discussion

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Before We Begin

- You show how professional and knowledgeable you are here!
- People read papers in different ways
- People Write Discussion in different ways

Structure!

1. List your main findings without any details/statistics
2. Explore your findings
   1. What we found?
   2. What others found/stated?
   3. What does it mean
3. Conclusions
4. Suggestions   Applications and Further Studies
5. Limitations

In Other Words…

- Statement of principal findings
- Strengths and weaknesses in relation to other studies: important differences in results
- Meaning of the study: possible explanations and implications for clinicians and policymakers
- Unanswered questions and future research
- Strengths and weaknesses of the study

Other Possible Interpretations that I Do not Agree with?

- Admit that you might be wrong
- Put forward an alternative interpretation
- Reiterate that your data could be used to confirm this alternative interpretation
- Give reasons for not agreeing with this alternative interpretation
- Propose your own conclusion
- Do not undermine their credibility
- if you treat others with respect, they will treat you with respect

Things to Avoid in the Discussion

- Over presentation of the results

- Unwarranted speculation

- Inflation of the importance of the findings

- Tangential issues

- The "bully pulpit"

- Conclusions that are not supported by the data

- Only beginners try to refer to all published papers in the field.

How Should I Structure the Conclusions?

- The Conclusions section is not just a summary
- Don't merely repeat what you said in the Abstract and Introduction
- A very brief revisit of the most important findings
- A final judgment on the importance and significance those findings
- Suggestions for improvements

How Should I Structure the Conclusions?(cont.)

- Recommendations for future work

- Recommendations for policy changes

- Unlike Abstracts and Introduction it…

  – Does not provide background details

  – Gives more emphasis to the findings

How Should I Begin and Increase the Impact of my Conclusions

- Typical sentences that make little impact
  - *In this paper we have presented a statistical study of the nature of …*
  - *In this work it has been attempted to analyze simple feedback loops with …*
- Do not begin a paper with *This paper describes*, avoiding ending the paper in the same way (*This paper has described*)

How Should I Begin and Increase the Impact of my Conclusions(cont.)

- They waste a lot of words (5–7 words that tell the reader nothing)
- They delay the main topic

	ORIGINAL VERSION (OV)	REVISED VERSION (RV)
1	In this study it is concluded that compression plays an important part in … It was found that …	Compression plays an important part in … In fact, it was found that …
2	This work has demonstrated that a number of compounds present in X are responsible for delaying the onset of …	A number of compounds present in X are responsible for delaying the onset of …
3	We have shown that the crystal structure of X reveals that …	The crystal structure of X reveals that …
4	It has been suggested in this paper that the localization of X in neurons is a good marker for neuronal viability.	The localization of X in neurons suggests that it is a good marker for neuronal viability.

I Don't Have Any Clear Conclusions, What Can I Do?

- Typical sentences…
  - *Unfortunately, we could not assess how much of the difference in outcome was due to .*
  - *Regrettably, we did not have the means to …*
  - *It is also unclear what conclusion should be drawn …*

Do NOT Sound Too Negative!

- you can add some hope for the future
  - *However, more definite conclusions will be possible when …*
  - *Despite this, our work provides support for …*
  - *In any case, we believe that these preliminary results indicate that …*
  - *If we had managed to … then we might have been able to …*
  - *If we manage to … then we might be able to…*
  - *Although it is too early to draw statistically significant conclusions, two patterns seem to be emerging …*

How Can I End My Conclusions?

- The first is to show how your work could be applied in another area.

  - *Our findings could be applied quite reliably in other engineering contexts without a significant degradation in performance.*

- You might however like to say where they could not be applied for the moment.

  - *However, it remains to be further clarified whether our findings could be applied to …*

How Can I End My Conclusions?(cont.)

- The second typical ending is to suggest future work.
  - *One area of future work will be to represent these relationships explicitly …*

The third way to end your Conclusions is to make a recommendation. The construction is thus:

- To *recommend* (*suggest, propose*) + *that* + someone or something + *should* (optional) + infinitive (without *to*) + something.
  - *We suggest that policy makers should give stakeholders a greater role in …*

Things to Avoid in the Conclusions

- Do not repeat introduction

- Do not present new data

- Do not repeat data presentation

- Avoid general statements that
  are not founded in data

- Do not write a review of all possible mechanisms that you have not accounted for your study

- Avoid broad claims and strong statements.

How Should I Discuss the Limitations of my Research?

- It is essential

- No need to consider these

  aspects of your research to

   be totally negative

- Tell your readers what went

  wrong, as this may help them

  with their own research

- Try to do so in a positive way

How Should I Discuss the Limitations of my Research?(cont.)

- *The limitation of this paper is that the two surveys were not conducted in the same period. This will affect our results in terms of …*

- *Although the two surveys were not conducted in the same period, this will only affect our results in terms of …*

How Should I Discuss the Limitations of my Research? (cont.)

- When you outline the limitations, you also need to be clear what these limitations are and what exactly the implications are.

- Explain the pitfall (i.e. the limitation in your work)

- Give reason for the pitfall

- Outline consequence of the pitfall

How Should I Discuss the Limitations of my Research?(cont.)

- *One limitation of our research was the sample size, which was too small.*

- *This is not enough!*

- *One limitation of our research was the sample size. Clearly 200 Xs are not enough to make generalizations about Y. However, from the results of those limited number of Xs, a clear pattern emerged which ...*

- That's better