

# Results interpretation and discussion

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Introduction to Research – MLS – RESH -326

## Results interpretation and discussion

Lecture {25}

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- When writing a dissertation or thesis, the results and discussion sections can be both the most interesting as well as the most challenging sections to write.
  - You may choose to write these sections separately, or combine them into a single chapter, depending on your university's guidelines and your own preferences.
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- There are advantages to both approaches.
  - Writing the results and discussion as separate sections allows you to focus first on what results you obtained and set out clearly what happened in your experiments and/or investigations without worrying about their implications.
  - This can focus your mind on what the results actually show and help you to sort them in your head.

- However, many people find it easier to combine the results with their implications as the two are closely connected.

## **Results Section**

- The Results section should set out your key experimental results, including any statistical analysis and whether or not the results of these are significant.
- You should cover any literature supporting your interpretation of significance. It does not have to include everything you did, particularly for a doctorate dissertation. However, for an undergraduate or master's thesis, you will probably find that you need to include most of your work.

- You should write your results section in the past tense: you are describing what you have done in the past.
  - Every result included **MUST** have a method set out in the methods section. Check back to make sure that you have included all the relevant methods.
  - Conversely, every method should also have some results given so, if you choose to exclude certain experiments from the results, make sure that you remove mention of the method as well.
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- If you are unsure whether to include certain results, go back to your research questions and decide whether the results are relevant to them. It doesn't matter whether they are supportive or not, it's about relevance. If they are relevant, you should include them.
  - Having decided what to include, next decide what order to use. You could choose chronological, which should follow the methods, or in order from most to least important in the answering of your research questions, or by research question and/or hypothesis.

- You also need to consider how best to present your results: tables, figures, graphs, or text. Try to use a variety of different methods of presentation, and consider your reader: 20 pages of dense tables are hard to understand, as are five pages of graphs, but a single table and well-chosen graph that illustrate your overall findings will make things much clearer.
  
- Make sure that each table and figure has a number and a title. Number tables and figures in separate lists, but consecutively by the order in which you mention them in the text. If you have more than about two or three, it's often helpful to provide lists of tables and figures alongside the table of contents at the start of your dissertation.
- The text and figures should be complementary, not repeat the same information. You should refer to every table or figure in the text. Any that you don't feel the need to refer to can safely be moved to an appendix, or even removed.

- Make sure that you including information about the size and direction of any changes, including percentage change if appropriate. Statistical tests should include details of p values or confidence intervals and limits.
- You will, almost inevitably, find that you need to include some slight discussion of your results during this section.

## **Discussion Section**

- This section has four purposes, it should:
  1. Interpret and explain your results
  2. Answer your research question
  3. Justify your approach
  4. Critically evaluate your study

- The discussion section therefore needs to review your findings in the context of the literature and the existing knowledge about the subject.
  - You also need to demonstrate that you understand the limitations of your research and the implications of your findings for policy and practice. This section should be written in the present tense.
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- The Discussion section needs to follow from your results and relate back to your literature review.
  - Some universities require a separate section on recommendations for policy and practice and/or for future research, while others allow you to include this in your discussion, so check the guidelines carefully.

- Most people are likely to write this section best by preparing an outline, setting out the broad thrust of the argument, and how your results support it.
- You may find techniques like mind mapping are helpful in making a first outline. You should start by referring back to your research questions, discuss your results, then set them into the context of the literature, and then into broader theory.
- This is likely to be one of the longest sections of your dissertation, and it's a good idea to break it down into chunks with sub-headings to help your reader to navigate through the detail.

- **The Importance of Understanding Differences**

- If your results are controversial and/or unexpected, you should set them fully in context and explain why you think that you obtained them.
- Your explanations may include issues such as a non-representative sample for convenience purposes, a response rate skewed towards those with a particular experience, or your own involvement as a participant for sociological research.



- You do not need to be apologetic about these, because you made a choice about them, which you should have justified in the methodology section. However, you do need to evaluate your own results against others' findings, especially if they are different. A full understanding of the limitations of your research is part of a good discussion section.
  
- At this stage, you may want to revisit your literature review, unless you submitted it as a separate submission earlier, and revise it to draw out those studies which have proven more relevant.
- Conclude by summarising the implications of your findings in brief, and explain why they are important for researchers and in practice, and provide some suggestions for further work.
- You may also wish to make some recommendations for practice.

- **These are the general rules you should adopt when composing your discussion of the results:**

1. Do not be verbose or repetitive
2. Be concise and make your points clearly
3. Avoid the use of jargon or undefined technical language
4. Follow a logical stream of thought; in general, interpret and discuss the significance of your findings in the same sequence you described them in your results section [a notable exception is to begin by highlighting an unexpected result or finding in order to grab the reader's attention]
  
5. Use the present verb tense, especially for established facts; however, refer to specific works or prior studies in the past tense
6. If needed, use subheadings to help organize your discussion or to categorize your interpretations into themes

- **The content of the discussion section of your paper most often includes:**
- Explanation of results.
- References to previous research.

- **Deduction:** A claim for how the results can be applied more generally. For example, describing lessons learned, proposing recommendations that can help improve a situation, or highlighting best practices.
- **Hypothesis:** A more general claim or possible conclusion arising from the results [which may be proved or disproved in subsequent research]. This can be framed as new research questions that emerged as a result of your analysis.

THANK YOU