Writing the Results and Discussion (Dissertation)

Please note: this guide is not specific to any one discipline, and the advice here needs to be tailored to meet the demands of your dissertation and the expectations of your school or department. Seek guidance from your supervisor for further support.

For an alternative format (for accessibility), click here.

Introduction
The results and discussion follow on from the methods or methodology chapter of the dissertation. This creates a natural transition from how you designed your study, to what your study reveals, highlighting your own contribution to the research area. The results of your study are often followed by a separate chapter of discussion. This is certainly the case with scientific writing. Some dissertations, however, might incorporate both the results and discussion in one chapter. This depends on the nature of your dissertation and the conventions within your school or department. Always follow the guidelines given to you and ask your supervisor for further guidance. As part of the Writing the Dissertation series, this guide covers the essentials of writing your results and discussion, giving you the necessary knowledge, tips and guidance needed to leave a positive impression on your markers! This guide covers the results and discussion as separate – although interrelated – chapters, but you can easily adapt the guidance to suit one single chapter – keep an eye out for some hints on how to do this throughout the guide. Here’s what to expect:

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What’s the difference between results and discussion?

To understand what the results and discussion sections are about, we need to clearly define the difference between the two. The results should provide a clear account of the findings. This is written in a dry and direct manner, simply highlighting the findings as they appear once processed. It’s expected to have tables and graphics, where relevant, to contextualise and illustrate the data. Rather than simply stating the findings of the study, the discussion interprets them to offer a more nuanced understanding of the research. The discussion is similar to the second half of the conclusion because it’s where you consider and formulate a response to the question, ‘what do we now know that we didn’t before?’ (see our Writing the Conclusion guide for more). The discussion achieves this by answering the research questions and responding to any hypotheses proposed. With this in mind, the discussion should be the most insightful chapter or section of your dissertation because it provides the most original insight.

Tip: In order to understand the difference between your results and discussion, visualise an iceberg. Think of your results as the portion above the sea – what you can immediately see – and think of the discussion as the portion beneath the sea – what you can’t immediately see without further investigation.

Let’s look at both the results and discussion in more detail.

Writing the results

The results chapter should provide a direct and factual account of the data collected without any interpretation or interrogation of the findings. As this might suggest, the results
chapter can be slightly monotonous, particularly for quantitative data. Nevertheless, it’s crucial that you present your results in a clear and direct manner as it provides the necessary detail for your subsequent discussion.

**Note:** If you’re writing your results and discussion as one chapter, then you can either:
1) write them as distinctly separate sections in the same chapter, with the discussion following on from the results, or 2) integrate the two throughout by presenting a subset of the results and then discussing that subset in further detail.

**Here are some of the most important factors to consider when writing your results chapter:**

**Structure**

How you structure your results chapter depends on the design and purpose of your study. Here are some possible options for structuring your results chapter (adapted from Glatthorn and Joyner, 2005):

- **Chronological** – depending on the nature of the study, it might be important to present your results in order of how you collected the data, such as a pretest-posttest design.

- **Research method** – if you’ve used a mixed-methods approach, you could isolate each research method and instrument employed in the study.

- **Research question and/or hypotheses** – you could structure your results around your research questions and/or hypotheses, providing you have more than one. However, keep in mind that the results on their own don’t necessarily answer the questions or respond to the hypotheses in a definitive manner. You need to interpret the findings in the discussion chapter to gain a more rounded understanding.
• **Variable** – you could isolate each variable in your study (where relevant) and specify how and whether the results changed.

**Using figures and tables**

For your results, you are expected to convert your data into tables and figures, particularly when dealing with quantitative data. Making use of tables and figures is a way of contextualising your results within the study. It also helps to visually reinforce your written account of the data. However, make sure you’re only using tables and figures to supplement, rather than replace, your written account of the results (see **What to avoid**). Figures and tables need to be numbered in order of when they appear in the dissertation, and they also need to be capitalised. You also need to make direct reference to them in the text, which you can do (with some variation) in one of the following ways:

*Figure 1 shows…*

*The results of the test (see Figure 1) demonstrate…*

The actual figures and tables themselves also need to be accompanied by a caption that briefly outlines what is displayed. For example:

*Table 1. Variables of the regression model*

Table captions normally appear above the table, whilst figures or other such graphical forms appear below, although it’s worth confirming this with your supervisor as the formatting can change depending on the school or discipline.

**Tip:** You can create captions on Microsoft Word using the caption function under the ‘References’ tab.
Using quotes

For most qualitative data, like interviews and focus groups, your data will largely consist of quotations from participants. When presenting this data, you should identify and group the most common and interesting responses and then quote two or three relevant examples to illustrate this point. Here’s a brief example from a qualitative study on the habits of online food shoppers:

Regardless of whether or not participants regularly engage in online food shopping, all but two respondents commented, in some form, on the convenience of online food shopping:

“It’s about convenience for me. I’m at work all week and the weekend doesn’t allow much time for food shopping, so knowing it can be ordered and then delivered in 24 hours is great for me” (Participant A).

“It fits around my schedule, which is important for me and my family” (Participant D).

“In the past, I’ve always gone food shopping after work, which has always been a hassle. Online food shopping, however, frees up some of my time” (Participant E).

As shown in this example, each quotation is attributed to a particular participant, although their anonymity is protected. The details used to identify participants can depend on the relevance of certain factors to the research. For instance, age or gender could be included.

**Note:** When reciting your participants through direct quotations, it’s important that you accurately reflect their contributions whilst making them legible. For this reason, it’s commonly accepted to delete fillers, like ‘um,’ unless they play an important part in your research, or signal something significant.
Writing the discussion

The discussion chapter is where “you critically examine your own results in the light of the previous state of the subject as outlined in the background, and make judgments as to what has been learnt in your work” (Evans et al., 2014: 12). Whilst the results chapter is strictly factual, reporting on the data on a surface level, the discussion is rooted in analysis and interpretation, allowing you and your reader to delve beneath the surface. Here are some of the most important factors to consider when writing your discussion chapter:

Structure

Like the results, there is no single way to structure your discussion chapter. As always, it depends on the nature of your dissertation and whether you’re dealing with qualitative, quantitative or mixed-methods research. It’s good to be consistent with the results chapter, so you could structure your discussion chapter, where possible, in the same way as your results.

When it comes to structure, it’s particularly important that you guide your reader through the various points or themes of your discussion. You should do this by structuring sections of your discussion, which might incorporate three or four paragraphs around the same theme or issue, in a three-part way that mirrors the typical three-part essay structure of introduction, main body and conclusion. Think of this structure like a cycle:

Figure 1 The three-part cycle that embodies a typical essay structure and reflects how you structure themes in your discussion.
**Introduction** – this is your topic sentence where you clearly state the focus of this paragraph/section. It’s often a fairly short, declarative statement in order to grab the reader’s attention, and it should be clearly related to your research purpose, such as responding to a research question.

**Main body** – this constitutes your analysis where you explore the theme or focus, outlined in the topic sentence, in further detail by interrogating why this particular theme or finding emerged and the significance of this data. This is also where you bring in the relevant secondary literature.

**Conclusion** – this is the evaluative stage of the cycle where you explicitly return back to the topic sentence and tell the reader what this means in terms of answering the relevant research question and establishing new knowledge. It could be a single sentence, or a short paragraph, and it doesn’t strictly need to appear at the end of every section or theme. Instead, some prefer to bring the main themes together towards the end of the discussion in a single paragraph or two. Either way, it’s imperative that you evaluate the significance of your discussion and tell the reader what this means.

**Note:** This is often how you’re taught to construct a paragraph, but the themes and ideas you engage with at dissertation level are going to extend beyond the confines of a short paragraph. Therefore, this is a structure to guide how you write about particular themes or patterns in your discussion.

**Using secondary literature**

Your discussion chapter should return to the relevant literature (previously identified in your literature review) in order to contextualise and deepen your reader’s understanding of the findings. This might help to strengthen your findings, or you might find contradictory evidence that serves to counter your results. In the case of the latter, it’s important that you consider why this might be and the implications for this. It’s through your incorporation of
secondary literature that allows you to consider the question, ‘what do we now know that we didn’t before?’

**Limitations**

You may have included a limitations section in your methodology chapter (see our [Writing the Methodology](#) guide), but it’s also common to have one in your discussion chapter. The difference here is that your limitations are directly associated with your results and the capacity to interpret and analyse those results. Think of it this way: the limitations in your methodology refer to the issues identified before conducting the research, whilst the limitations in your discussion refer to the issues that emerged after conducting the research. For example, you might only be able to identify a limitation about the external validity or generalisability of your research once you have processed and analysed the data. Try not to overstress the limitations of your work – doing so can undermine the work you’ve done – and try to contextualise them, perhaps by relating them to certain limitations of other studies.

**Recommendations**

It’s often good to follow your limitations with some recommendations for future research. This creates a neat linearity from what didn’t work, or what could be improved, to how other researchers could address these issues in the future. This helps to reposition your limitations in a positive way by offering an action-oriented response. Try to limit the amount of recommendations you discuss – too many can bring the end of your discussion to a rather negative end as you’re ultimately focusing on what should be done, rather than what you have done. You also don’t need to repeat the recommendations in your conclusion if you’ve included them here.
What to avoid

**Over-reliance on tables and figures** – it’s very common to produce visual representations of data, such as graphs and tables, and to use these representations in your results chapter. However, the use of these figures should not entirely replace your written account of the data. You don’t need to specify every detail in the data set, but you should provide some written account of what the data shows, drawing your reader’s attention to the most important elements of the data. Here, the figures support your account and help to contextualise your results. Simply stating, ‘look at Table 1’, without any further detail is not sufficient. It’s normally exercised as a way of saving words, but your markers will know!

**Ignoring unexpected or contradictory data** – research can be a complex process with ups and downs, surprises and anomalies. Don’t be tempted to ignore any data that doesn’t meet your expectations, or that perhaps you’re struggling to explain. Failing to report on data for these, and other such reasons, is a problem because it undermines your credibility as a researcher, which inevitably undermines your research in the process. You have to do your best to provide some reason to such data. For instance, there might be some methodological reason behind a particular trend in the data.

**Including raw data** – you don’t need to include any raw data in your results chapter – raw data meaning unprocessed data that hasn’t undergone any calculations or other such refinement. This can overwhelm your reader and obscure the clarity of the research. You can include raw data in an appendix, providing you feel it’s necessary.

**Presenting new results in the discussion** – you shouldn’t been stating original findings for the first time in the discussion chapter. The findings of your study should first appear in your results before elaborating on them in the discussion.

**Overstressing the significance of your research** – it’s important that you clarify what your research demonstrates so you can highlight your own contribution to the research field. However, don’t overstress or inflate the significance of your results. It’s always difficult to provide definitive answers in academic research, especially with qualitative data. You should be confident and authoritative where possible, but don’t claim to reach the
absolute truth when perhaps other conclusions could be reached. Where necessary, you should use hedging (see definition) to slightly soften the tone and register of your language.

**Definition:** Hedging refers to “the act of expressing your attitude or ideas in tentative or cautious ways” (Singh and Lukkarila, 2017: 101). It’s mostly achieved through a number of verbs or adverbs, such as ‘suggest’ or ‘seemingly.’

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**FAQs**

**Q** What’s the difference between the results and discussion?

**A** The results chapter is a factual account of the data collected, whilst the discussion considers the implications of these findings by relating them to relevant literature and answering your research question(s). See **What's the difference between results and discussion?** in this guide for more.

**Q** Should the discussion include recommendations for future research?

**A** Your dissertation should include some recommendations for future research, but it can vary where it appears. Recommendations are often featured towards the end of the discussion chapter, but they also regularly appear in the conclusion chapter (see our **Writing the Conclusion** guide for more). It simply depends on your dissertation and the conventions of your school or department. It’s worth consulting any specific guidance that you’ve been given, or asking your supervisor directly.

**Q** Should the discussion include the limitations of the study?

**A** Like the answer above, you should engage with the limitations of your study, but it might appear in the discussion of some dissertations, or the conclusion of others. Consider the narrative flow and whether it makes sense to include the limitations in your discussion.
chapter, or your conclusion. You should also consult any discipline-specific guidance you’ve been given, or ask your supervisor for more. Be mindful that this is slightly different to the limitations outlined in the methodology or methods chapter (see Writing the discussion).

**Q** Should the results and discussion be in the first person or third?

**A** It’s important to be consistent, so you should use whatever you’ve been using throughout your dissertation. Third person is more commonly accepted, but certain disciplines are happy with the use of first person. Just remember that the first person pronoun can be a distracting, but powerful device, so use it sparingly. Consult your lecturer for discipline-specific guidance.

**Q** Is there a difference between the discussion and the conclusion of a dissertation?

**A** Yes, there is a difference. The discussion chapter is a detailed consideration of how your findings answer your research questions. This includes the use of secondary literature to help contextualise your discussion. Rather than considering the findings in detail, the conclusion briefly summarises and synthesises the main findings of your study before bringing the dissertation to a close. Both are similar, particularly in the way they ‘broaden out’ to consider the wider implications of the research. They are, however, their own distinct chapters, unless otherwise stated by your supervisor.

**Summary and Checklist**

The results and discussion chapters (or chapter) constitute a large part of your dissertation as it’s here where your original contribution is foregrounded and discussed in detail. Remember, the results chapter simply reports on the data collected, whilst the discussion is where you consider your research questions and/or hypothesis in more detail by interpreting and interrogating the data. You can integrate both into a single chapter and weave the interpretation of your findings throughout the chapter, although it’s common for
both the results and discussion to appear as separate chapters. Consult your supervisor for further guidance.

Here's a final checklist for writing your results and discussion. Remember that not all of these points will be relevant for you, so make sure you cover whatever's appropriate for your dissertation. The asterisk (*) indicates any content that might not be relevant for your dissertation.

- I have structured and presented my results and discussion in a clear and accessible way that suits the nature of my research

- I have used tables and figures (where relevant) to contextualise the data and to supplement, rather than replace, my written account of the results*

- I have revisited my literature review and engaged with secondary literature to discuss and interpret my findings

- I have engaged with any contradictory or surprising data that might not adhere to my expectations or that might not correspond with other findings in the data*

- I have engaged with the limitations of my research and suggested recommendations for future research

References


Further support

**Academic Skills website**
library.soton.ac.uk/sash/academic-writing

**Academic Skills Hub**
Drop in Mon-Fri, 10-12 or 2-4, Hartley Library

**Training and Workshops**
library.soton.ac.uk/sash/workshops/library

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