

Results and Discussion Sections in the Scientific Research Article

Rolf Norgaard – University of Colorado at Boulder

You've launched your scientific research article with an introduction that identifies the problem you are tackling and that sets your work in the context of an ongoing conversation. You've also clarified in your methods section your approach to the problem you have identified.

Now, as you sift through data and results, you face the challenge of making sense of your work. The results and discussion sections of your research article loom ahead. How should you approach your writing task?

Results Section

Think of the results section of your research article as answering the question “What?”—What did you find? This section, typically written in a descriptive fashion, reports on your findings. Save the analysis for the discussion section that follows.

Best practices:

- Clearly communicates key findings with no or minimal interpretive comment
- Provide sufficient detail to justify any conclusions you draw later.
- Report most significant or general results first, then work toward more specific data.
- Group results in categories
- Include only those data that are relevant to the discussion that follows; raw data can be placed in an appendix.
- Note estimates of margins of error in your data.
- Use visual devices to capture complex information or depict trends or comparisons.

Pitfalls:

- Results/data poorly organized
- Discounts data/results inconvenient to desired or expected outcome

Tip:

- Do your results lay a sufficient foundation for the discussion that will follow?

Discussion Section

The discussion section answers the question “So what?” Here, you make a case for the significance and value of your work by analyzing your results and showing how they can help you support your assertion or claim about the problem that you are addressing. This section also discusses the implications and relevance of your study and places your work in the context of an ongoing disciplinary conversation. Think of the introduction and discussion sections as the “bookends” that frame your study.

Best practices:

- Thorough analysis and interpretation of results in light of questions that prompted your study. Be sure to clarify whether results confirm or refute initial hypothesis.
- Discusses implications of work and its significance; suggests further research.
- Accounts for difficulties and challenges in the research, and problems in the research design. Note limitations of your approach
- Clarifies how your work fits into the ongoing discussions of your field.

Pitfalls:

- Claims made outstrip the actual data.
- Significance or relevance of work not clear

Tip:

- The discussion section should provide the analytic culmination of the more descriptive discussions in the introduction, methods, and results sections.

Tips on Style

- Use past tense for:
 - What was done in this study
 - What others found in their studies
- Use present tense for:
 - Universally accepted truths
 - Findings believed to be repeatable
 - Things really going on right now
- Use future tense for:
 - What is planned for the next step
 - What impacts the results will have
 - How the results will be used