

Research Guides


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University of Southern California / Research Guides / Organizing Your Social Sciences Research Paper / 6. The Methodology

Organizing Your Social Sciences Research Paper: 6. The Methodology

The purpose of this guide is to provide advice on how to develop and organize a research paper in the social sciences.

- Purpose of Guide
- Types of Research Designs** ▾
- 1. Choosing a Research Problem** ▾
- 2. Preparing to Write** ▾
- 3. The Abstract** ▾
- 4. The Introduction** ▾
- 5. The Literature Review** ▾
- 6. The Methodology**
- 7. The Results** ▾
- 8. The Discussion** ▾
- 9. The Conclusion** ▾
- 10. Proofreading Your Paper** ▾
- 11. Citing Sources** ▾
- Annotated Bibliography
- Giving an Oral Presentation** ▾
- Grading Someone Else's Paper
- How to Manage Group Projects** ▾
- Writing a Book Review** ▾
- Writing a Case Study
- Writing a Field Report** ▾
- Writing a Policy Memo
- Writing a Research Proposal
- Acknowledgements

Definition

The methods section describes actions to be taken to investigate a research problem and the rationale for the application of specific procedures or techniques used to identify, select, process, and analyze information applied to understanding the problem, thereby, allowing the reader to critically evaluate a study's overall validity and reliability. The methodology section of a research paper answers two main questions: How was the data collected or generated? And, how was it analyzed? The writing should be direct and precise and always written in the past tense.

Kallet, Richard H. "How to Write the Methods Section of a Research Paper." *Respiratory Care* 49 (October 2004): 1229-1232.

Importance of a Good Methodology Section

You must explain how you obtained and analyzed your results for the following reasons:

- Readers need to know how the data was obtained because the method you chose affects the findings and, by extension, how you interpreted them.
- Methodology is crucial for any branch of scholarship because an unreliable method produces unreliable results and, as a consequence, undermines the value of your interpretations of the findings.
- In most cases, there are a variety of different methods you can choose to investigate a research problem. The methodology section of your paper should clearly articulate the reasons why you chose a particular procedure or technique.
- The reader wants to know that the data was collected or generated in a way that is consistent with accepted practice in the field of study. For example, if you are using a multiple choice questionnaire, readers need to know that it offered your respondents a reasonable range of answers to choose from.
- The method must be appropriate to fulfilling the overall aims of the study. For example, you need to ensure that you have a large enough sample size to be able to generalize and make recommendations based upon the findings.
- The methodology should discuss the problems that were anticipated and the steps you took to prevent them from occurring. For any problems that do arise, you must describe the ways in which they were minimized or why these problems do not impact in any meaningful way your interpretation of the findings.
- In the social and behavioral sciences, it is important to always provide sufficient information to allow other researchers to adopt or replicate your methodology. This information is particularly important when a new method has been developed or an innovative use of an existing method is utilized.

Bem, Daryl J. Writing the Empirical Journal Article. Psychology Writing Center. University of Washington; Denscombe, Martyn. *The Good Research Guide: For Small-Scale Social Research Projects*. 5th edition. Buckingham, UK: Open University Press, 2014; Lunenburg, Frederick C. *Writing a Successful Thesis or Dissertation: Tips and Strategies for Students in the Social and Behavioral Sciences*. Thousand Oaks, CA: Corwin Press, 2008.

Structure and Writing Style

I. Groups of Research Methods

There are two main groups of research methods in the social sciences:

Writing Tip

Statistical Designs and Tests? Do Not Fear Them!

Don't avoid using a quantitative approach to analyzing your research problem just because you fear the idea of applying statistical designs and tests. A qualitative approach, such as conducting interviews or content analysis of archival texts, can yield exciting new insights about a research problem, but it should not be undertaken simply because you have a disdain for running a simple regression. A well designed quantitative research study can often be accomplished in very clear and direct ways, whereas, a similar study of a qualitative nature usually requires considerable time to analyze large volumes of data and a tremendous burden to create new paths for analysis where previously no path associated with your research problem had existed.

To locate data and statistics, GO HERE.

Another Writing Tip

Knowing the Relationship Between Theories and Methods

There can be multiple meaning associated with the term "theories" and the term "methods" in social sciences

There are two main groups of research methods in the social sciences:

1. **The empirical-analytical group approaches the study of social sciences in a similar manner that researchers study the natural sciences.** This type of research focuses on objective knowledge, research questions that can be answered yes or no, and operational definitions of variables to be measured. The empirical-analytical group employs deductive reasoning that uses existing theory as a foundation for formulating hypotheses that need to be tested. This approach is focused on explanation.
2. **The interpretative group of methods is focused on understanding phenomenon in a comprehensive, holistic way.** Interpretive methods focus on analytically disclosing the meaning-making practices of human subjects [the why, how, or by what means people do what they do], while showing how those practices arrange so that it can be used to generate observable outcomes. Interpretive methods allow you to recognize your connection to the phenomena under investigation. However, the interpretative group requires careful examination of variables because it focuses more on subjective knowledge.

II. Content

The introduction to your methodology section should begin by restating the research problem and underlying assumptions underpinning your study. This is followed by situating the methods you will use to gather, analyze, and process information within the overall “tradition” of your field of study and within the particular research design you have chosen to study the problem. If the method you choose lies outside of the tradition of your field [i.e., your review of the literature demonstrates that it is not commonly used], provide a justification for how your choice of methods specifically addresses the research problem in ways that have not been utilized in prior studies.

The remainder of your methodology section should describe the following:

- Decisions made in selecting the data you have analyzed or, in the case of qualitative research, the subjects and research setting you have examined,
- Tools and methods used to identify and collect information, and how you identified relevant variables,
- The ways in which you processed the data and the procedures you used to analyze that data, and
- The specific research tools or strategies that you utilized to study the underlying hypothesis and research questions.

In addition, an effectively written methodology section should:

- **Introduce the overall methodological approach for investigating your research problem.** Is your study qualitative or quantitative or a combination of both (mixed method)? Are you going to take a special approach, such as action research, or a more neutral stance?
- **Indicate how the approach fits the overall research design.** Your

research. A helpful way to delineate between them is to understand “theories” as representing different ways of characterizing the social world when you research it and “methods” as representing different ways of generating and analyzing data about that social world. Framed in this way, all empirical social sciences research involves theories and methods, whether they are stated explicitly or not. However, while theories and methods are often related, it is important that, as a researcher, you deliberately separate them in order to avoid your theories playing a disproportionate role in shaping what outcomes your chosen methods produce.

Introspectively engage in an ongoing dialectic between the application of theories and methods to help enable you to use the outcomes from your methods to interrogate and develop new theories, or ways of framing conceptually the research problem. This is how scholarship grows and branches out into new intellectual territory.

Reynolds, R. Larry. Ways of Knowing. Alternative Microeconomics. Part 1, Chapter 3. Boise State University; The Theory-Method Relationship. S-Cool Revision. United Kingdom.

Yet Another Writing Tip

Methods and the

- **Indicate how the approach fits the overall research design.** Your methods for gathering data should have a clear connection to your research problem. In other words, make sure that your methods will actually address the problem. One of the most common deficiencies found in research papers is that the proposed methodology is not suitable to achieving the stated objective of your paper.
- **Describe the specific methods of data collection you are going to use**, such as, surveys, interviews, questionnaires, observation, archival research. If you are analyzing existing data, such as a data set or archival documents, describe how it was originally created or gathered and by whom. Also be sure to explain how older data is still relevant to investigating the current research problem.
- **Explain how you intend to analyze your results.** Will you use statistical analysis? Will you use specific theoretical perspectives to help you analyze a text or explain observed behaviors? Describe how you plan to obtain an accurate assessment of relationships, patterns, trends, distributions, and possible contradictions found in the data.
- **Provide background and a rationale for methodologies that are unfamiliar for your readers.** Very often in the social sciences, research problems and the methods for investigating them require more explanation/rationale than widely accepted rules governing the natural and physical sciences. Be clear and concise in your explanation.
- **Provide a justification for subject selection and sampling procedure.** For instance, if you propose to conduct interviews, how do you intend to select the sample population? If you are analyzing texts, which texts have you chosen, and why? If you are using statistics, why is this set of data being used? If other data sources exist, explain why the data you chose is most appropriate to addressing the research problem.
- **Describe potential limitations.** Are there any practical limitations that could affect your data collection? How will you attempt to control for potential confounding variables and errors? If your methodology may lead to problems you can anticipate, state this openly and show why pursuing this methodology outweighs the risk of these problems cropping up.

NOTE: Once you have written all of the elements of the methods section, subsequent revisions should focus on how to present those elements as clearly and as logically as possible. The description of how you prepared to study the research problem, how you gathered the data, and the protocol for analyzing the data should be organized chronologically. For clarity, when a large amount of detail must be presented, information should be presented in sub-sections according to topic.

ANOTHER NOTE: If you are conducting a qualitative analysis of a research problem, the methodology section generally requires a more elaborate description of the methods used as well as an explanation of the processes applied to gathering and analyzing of data than is generally required for studies using quantitative methods. Because you are the primary instrument for generating the data, the process for collecting that data has a significantly greater impact on producing the findings. Therefore, qualitative research

Methodology

Do not confuse the terms "methods" and "methodology." As Schneider notes, a **method** refers to the technical steps taken to do research. Descriptions of methods usually include defining them and stating why you have chosen specific techniques to investigate a research problem, followed by an outline of the procedures you used to systematically select, gather, and process the data [remember to always save the interpretation of data for the discussion section of your paper].

Methodology refers to a discussion of the underlying reasoning why particular methods were used. This discussion includes describing the theoretical concepts that inform the choice of methods to be applied, placing the choice of methods within the more general nature of academic work, and reviewing its relevance to examining the research problem. The discussion also includes a thorough review of the literature about methods other scholars have used to study the topic.

Bryman, Alan. "Of Methods and Methodology." *Qualitative Research in Organizations and Management: An International Journal* 3 (2008):159-168; Schneider, Florian. "What's in a Methodology: The Difference between Method, Methodology, and Theory...and How to Get

requires a more detailed description of the methods used.

III. Problems to Avoid

Irrelevant Detail

The methodology section of your paper should be thorough but to the point. Do not provide any background information that doesn't directly help the reader to understand why a particular method was chosen, how the data was gathered or obtained, and how it was analyzed.

Unnecessary Explanation of Basic Procedures

Remember that you are not writing a how-to guide about a particular method. You should make the assumption that readers possess a basic understanding of how to investigate the research problem on their own and, therefore, you do not have to go into great detail about specific methodological procedures. The focus should be on how you *applied a method*, not on the mechanics of *doing a method*. An exception to this rule is if you select an unconventional methodological approach; if this is the case, be sure to explain why this approach was chosen and how it enhances the overall process of discovery.

Problem Blindness

It is almost a given that you will encounter problems when collecting or generating your data, or, gaps will exist in existing data or archival materials. Do not ignore these problems or pretend they did not occur. Often, documenting how you overcame obstacles can form an interesting part of the methodology. It demonstrates to the reader that you can provide a cogent rationale for the decisions you made to minimize the impact of any problems that arose.

Literature Review

Just as the literature review section of your paper provides an overview of sources you have examined while researching a particular topic, the methodology section should cite any sources that informed your choice and application of a particular method [i.e., the choice of a survey should include any citations to the works you used to help construct the survey].

It's More than Sources of Information!

A description of a research study's method should not be confused with a description of the sources of information. Such a list of sources is useful in and of itself, especially if it is accompanied by an explanation about the selection and use of the sources. The description of the project's methodology complements a list of sources in that it sets forth the organization and interpretation of information emanating from those sources.

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PoliticsEastAsia.com. Chinese
Department, University of
Leiden, Netherlands.

Azevedo, L.F. et al. "How to Write a Scientific Paper: Writing the Methods Section." *Revista Portuguesa de Pneumologia* 17 (2011): 232-238; Blair Lorrie. "Choosing a Methodology." In *Writing a Graduate Thesis or Dissertation*, Teaching Writing Series. (Rotterdam: Sense Publishers 2016), pp. 49-72; Butin, Dan W. *The Education Dissertation A Guide for Practitioner Scholars*. Thousand Oaks, CA: Corwin, 2010; Carter, Susan. *Structuring Your Research Thesis*. New York: Palgrave Macmillan, 2012; Kallet, Richard H. "How to Write the Methods Section of a Research Paper." *Respiratory Care*

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