How to Write a Research Paper

Defining a Research Paper

A research paper expands the scope of human knowledge by addressing a relevant question through a systematic analysis of data. It is different from an editorial or opinion essay, which simply prevent a point of a view on a topic. A good research paper must also go beyond a simple summary of existing research, and contribute new insights through an original research activity and the presentation of novel evidence.

Step 1: Developing a Research Proposal

The hardest part of writing a research paper is getting your project off the ground. In general, the basic path to writing a research proposal is to develop a question, review existing literature, state your theory/hypotheses, and develop a research design. In practice, most researchers do not follow this linear path, instead iterating back and forth until they are satisfied with the plan. You may find your original question has already been thoroughly answered by existing research, or that your research design cannot evaluate your hypotheses. You should be willing to throw out and revise your ideas at this stage. It is much better to spend a little more time planning than pursue a flawed project.

Below are the basic substeps in developing your research proposal:

1. *Generate a Research Question* – A good research question must be relevant, ambitious, and answerable. The best questions are interesting to the scholarly audience in your field, as well as the broader public. There are different types of research questions, but in general, scholars of politics and public policy pursue causal questions– "what is the effect of A on B?" We also try to understand the processes or mechanisms through which causal relationships are transferred.

    There is no one "right way to generate a research question. The standard approach is to read existing research, and identify gaps in the l that you can address. This is fine, but be careful about fixating on a question that is only important to the scholarly audience. I find my best ideas often come after reading/watching news about a given topic, which helps ensure that the research is relevant. Think to yourself: "if I brought this up at a party, would everyone fall asleep?"

A third strategy is to consider what data is available, and then think about what questions you might be able to answer with that data. "I have this great dataset, what can I do with it?" Some scholars are against this approach, and think you must always come up with your question first. I believe having an eye on possible data and research designs early on can help weed out infeasible projects. There is no sense asking a question that is impossible to answer.

Note that you do not need to generate a brand new question– it is perfectly acceptable to take someone else's, and try to improve on their answer in some way with a new approach. The biggest advances in human knowledge generally come from multiple researchers working on the same question.

2. *Review Existing Research* – Before moving too far with your project, you must get a sense of where the existing state of human knowledge lies with respect to your topic and question. Are there existing theories/frameworks that offer answers? What empirical evidence has been provided? What are the weaknesses and gaps in existing work? Are there ways to extend the findings of other researchers, by replicating existing designs in new settings? In reviewing the literature, you should come away with both a sense of where you might make a contribution, as well as some ideas for your hypotheses and research design.

3. *State Your Theory/Hypotheses* – A hypothesis is simply a preliminary answer or answers to your research question. We generally derive hypotheses from a broader theory of how the world works. "If this theory is correct, we should observe relationships A, B, and C in our data." Your theory and hypotheses may be your own, or you may consider the theories in existing research. Often good papers set up competing theories and hypotheses– "Scholar A says this, Scholar B says this." The goal of your research project is to accept or reject hypotheses, to evaluate them in light of your data and evidence. If we reject a hypothesis derived from a theory, this should raise doubts as to the merits of the theory itself.

In political science, our shared goal is develop theories that can explain and predict political phenomena. In public policy research, we are less interested in developing and testing theories, and more interested in evaluating the relative merits of different policy options. Public policy research papers may have less of a theoretical framing, but it may be helpful to think it terms of hypotheses nonetheless.

4. *Develop a Research Design* – As a researcher, your job is to develop a convincing approach to answer your question and assess different hypotheses. In political science and public policy research, there are a range of data types and methods of analysis– large N quantitative datasets; case studies and small-N comparisons; survey and field experiments; structured

interviews; and even ethnographic techniques. Your method and data should be suitable for the question you are interested in, and feasible given your skills and timeframe.

Because different methods have different strengths, the best projects will often combine multiple approaches to address the same question. This is known as multi-method research. For example, case studies are helpful in understanding the details and mechanisms behind a causal relationship, but it is difficult to generalize from a single case. A statistical analysis of a large dataset can be used to see whether the relationship holds in the broader population. Experiments can assess whether subjects respond to a stimulus, but we often dont know why subjects respond the way the do. Semi-structured interviews with a subset of participants can clarify and contextualize the experimental results.

A good research proposal– whether it is a short one-page grant proposal or a thirty-page dissertation prospectus– contains the same elements. It should state your question; your motivations for pursuing that question; your hypotheses; and your research design.

Step 2: Data Collection and Analysis

With your research proposal in place, it is now time to execute– conduct your interviews, run your survey, collect your dataset, etc. In some instances, it will be helpful to run a pilot or practice study in some way, to avoid mistakes in the full data collection process. If you are conducting research on human subjects, you should make sure your study meets the ethical standards set by your institution's human subjects committee. You should document your research activities as much as possible (sources, questions, coding decisions) which will allow other researchers to replicate and evaluate the strength of your design. Good data collection and analysis is ethical, transparent, and thorough.

Step 3: Write up Draft Paper

A good research paper generally has the following sections, many of which can be expanded from your research proposal.

- Introduction: The introduction states the research question and motivation– why it matters from a substantive and scholarly perspective. You should also summarize your primary argument and findings, and highlight your contribution. The introduction should close with a road map of the rest of the paper.

- Literature Review: The literature review summarizes the state of existing research, highlighting weaknesses or contradictions. This section should be brief and can be subsumed into the Introduction or Theory/Hypothesis sections.

- Theory/Hypothesis: This section should describe the theoretical intuitions that motivate the analysis and formally articulate the hypotheses.

- Data/Research Design: The data and research design section should describe your research activities the data you collected, how you collected it, and the plan for your analysis. If you have a quantitative dataset, you should provide tables of definitions and summary statistics for key variables. If you are conducting a comparison of different cases, describe the case selection strategy.

- Analysis: Here you present the findings from your research– figures, tables, interview evidence, case studies, and so forth. At the end of your analysis section, the reader should know whether the evidence confirmed or disproved your hypotheses. You should also be transparent about any limitations of the analysis or assumptions you made.

- Conclusion: The conclusion summarizes your findings before moving on to the broader implications of your research. You may highlight further research avenues or policy recommendations, if applicable.

Once you finish a draft, the best thing to do is get some distance from it. When you are ready to work on the project again, send it to a classmate, friend, or advisor, and think about whether to incorporate their suggestions. It make take several drafts before feeling a paper is "done," so give yourself time to revise your work.

Resources

Gerring, J. 2001. "Social Science Methodology: A Criterial Framework." New York: Cambridge University Press, p. 206-221

King, G., R. O. Keohane & S. Verba. 1994. "Designing Social Inquiry: Scientific Inference in Qualitative Research." Princeton: Princeton University Press: p. 3-33.