

Evaluating Sources I: Internal Characteristics & Research Design

When you find a source, you will want to read it closely.

Your evaluation of the source will largely depend on how it relates to other sources.

However, you will not be able to effectively evaluate a source without closely analyzing its internal characteristics and research design.

What will I learn by reading this guide?

This guide suggests a series of questions you will want to answer about a scholarly article before beginning comparing and synthesizing it with other sources.

The Genre

Q: What genre is this article?

A: There are a few typical genres of scholarly writing, but you should be aware that the characteristics of these are quite discipline specific.

- Reports on original research or new empirical studies
- Literature reviews, literature surveys, or meta-analyses that summarize, synthesize, or evaluate several other studies
- Case studies, case reports, or species descriptions that introduce anecdotes or examples that suggest the limitations of the existing literature or new directions for research
- Scholarly book reviews that evaluate recently published books (if you are going to use one of these sources as a reference, be sure to find and read the book itself as well)
- Position papers that advance new opinions, perspectives, or theories without undertaking original, rigorously designed, empirical research
- Letters and research notes that provide brief descriptions of urgent research that is in progress or has been recently completed
- Data papers and supplemental articles that provide detailed descriptions of datasets

Keep in Mind

Usually, most of your research should consist of reports on original research or new empirical studies, so the rest of this guide will focus on this genre.

The Research Question

Q: What is the research question?

A: The research question is what an article is trying to find an answer for or to explain. Some articles have more than one question, and many articles have a main question and a series of subsidiary questions that the article answers in order to answer the main research question.

Generally, the research question emerges from the literature review. If the article satisfactorily answers the research question, it fills a gap in the state of knowledge about a topic, resolves a contradiction, or demonstrates limitations to the existing scholarly consensus.

Q: Why is this a significant question?

A: Often the significance of a research question can be demonstrated by showing how it contributes to an ongoing scholarly conversation. One good strategy for determining an article's significance is to look closely at the literature review to see how the author connects his or her own inquiry to the perspectives that already exist in the literature.

Alternatively, the article may establish its significance by discussing a larger social, political, economic, or cultural problem or issue to which it relates. This may be evident in the introduction, literature review, and/or conclusion.

Keep in Mind

The research question is sometimes explicitly stated in the article, but many times it is implicit. Likewise, you will sometimes be unable to find a portion of the article that directly addresses the question's significance. You may have to reconstruct a research question that accounts for as much of the article as possible by looking at the claims, methods, and evidence. Establishing the significance of a question will require attention to sources on similar topics.

Theories, Methods, Evidence

Q: What are the research methods used to answer the question?

A: Research methods are the systematic means through which an author has collected, processed, and analyzed evidence responsive to the research question. Researchers will often explicitly describe their research methods in the hard and social sciences, but the research methods in the humanities may require some reconstruction.

Q: What theories are tested or used in the research?

A: Theories are generalizations made from empirical evidence; they provide a "lens" or "way of seeing" the evidence. In the sciences, theories usually are used to produce falsifiable predictions about empirical evidence and are built upon repeated observations or experiments; many scientific projects consequently test such predictions. In more interpretive and qualitative research, theories are more often used to explain or structure the evidence, but there may be some kind of process of verification or a comparative account of competing theories.

Q: What is the most important evidence or data?

A: You will first want to characterize the evidence or data. What kind of evidence is it? How does it contribute to your understanding of the research question? Which type of evidence is most important, and which evidence best supports the researcher's findings? It is not enough simply to label the evidence with a very general label; you must summarize how the research method produced the evidence and how the evidence responds to the research question. When characterizing and describing evidence, be very specific.

Keep in Mind

The relationships between laws, theories, models, and hypotheses can be complicated. While it is worthwhile to consider these relationships, the main thing you need to figure out is how an article decides what counts as evidence, which evidence is most important, and how a given research method contributes to or undermines attempts to generalize about a phenomenon, artifact, text, archive, or state of affairs.

Inferences & Interpretations

Q: What are the inferences the article draws from this evidence? What interpretations of the evidence are provided?

A: Evidence is not usually expected to speak for itself; researchers give it meaning by viewing it in light of a working hypothesis, model, or theory. An inference is a logical conclusion, finding, or interpretation drawn from the evidence on the basis of a model of theory. It may confirm or refute a hypothesis.

Q: What are the limitations to these inferences or alternative interpretations of the evidence?

A: Since research on settled questions is rarely worth undertaking or publishing, there are almost always alternative interpretations of the evidence. Moreover, any research design selects what is foregrounded or backgrounded, emphasized or de-emphasized, and included or excluded. Identifying these limitations is not the same thing as refuting an article; instead, it is the necessary process of determining what an article is able to demonstrate and what it can do.

Keep in Mind

Be sure to think critically about how the inferences relate to the evidence as well as to the working hypotheses, models, or theories. Some articles explicitly acknowledge limitations, directions for future research, or alternative interpretations of the evidence, but this is often work you will have to do on your own. The goal is to generate plausible alternative explanations and identify limits while staying in contact with the empirical basis of a research article and the scholarly debates that pertain to a research question. Ground this work in the evidence in order to avoid “conspiratorial” critiques of scholarship.