IRRATIONAL LABS

5-Step Guide to Conducting an Evidence-Based Lit Review (for non-scientists)

Why Conduct an Evidence-Based Lit Review?

Over the past few decades, behavioral scientists have learned a massive amount about how people think and why they do what they do. These behavioral findings and insights are well documented, and can be applied to inform product design and strategy.

Basing strategy on evidence-based solutions (rather than mere conjecture, anecdotal evidence or self-report UX data) is key to any successful behavioral science-based design. Like building the foundation for a house, the first step in designing products from a behavioral science perspective is to review the field of evidence-based findings to establish a general understanding of a topic. These types of literature reviews can be used to inform product strategy by providing an understanding of what has already been done, what has (or hasn't) worked before (and in what context), with implications for directly applying insights to product development. This document serves as an overview and guide to help you conduct these types of reviews.

What sources should I be using?

Where can you locate past behavioral science findings and insights? Most are published in what are called "peer-reviewed" academic journals. These articles undergo expert screening before publication to ensure sound methods, accuracy and integrity of the data, which is why we recommend that the sources that make up your lit review should primarily be drawn from peer-reviewed journals. Other sources beyond scholarly articles can also be used to supplement these papers (i.e., conference proceedings, survey reports, case-studies, white-papers, reports, etc.).

Conducting A Literature Review: 5-Step Guide

## Step 1. Define the Purpose of Your Review

What type of literature review are you conducting? Are you trying to get a general sense of a behavioral intervention or underlying theory? Or do you need in-depth knowledge of how different demographic groups respond to an intervention under specific conditions? During this first step, you should be defining your topic and research question – a narrower topic allows you to focus more deeply, rather than skimming the surface.

Step 2. Track Down Sources

Use Google Scholar.

While most academic researchers have access to comprehensive academic databases and special search engines, Google Scholar is one of the most straightforward ways to begin your search.[1] You can use Google Scholar to:

1. Use the advanced search feature to filter results (e.g., limit search results to articles from the past 5 years)

2. Figure out if the article is a seminal publication by seeing how often other researchers have cited it in other papers.

3. Click "related articles" to expand your sources

4. Get direct links to articles
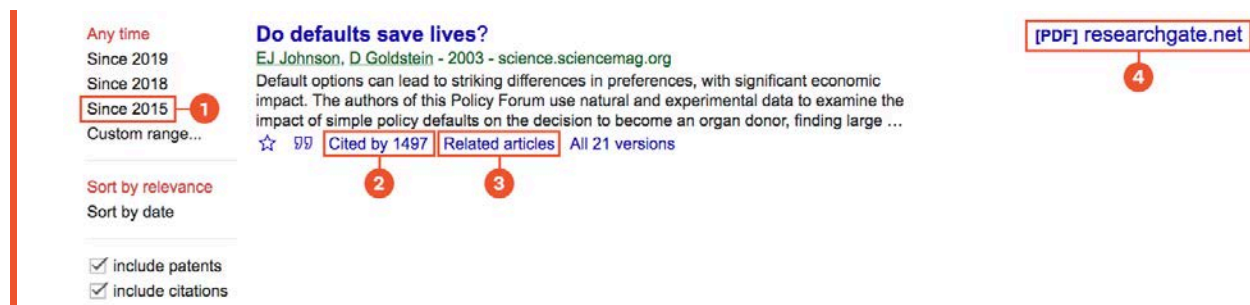
Pro-Tip: Use the right keywords.

Thinking of the right keywords to use for your search can be challenging, especially since various disciplines (economics, psychology, marketing, political science, etc.) study human behavior using different terminology. Start with the language from your research topic to find articles, then check the vocabulary used in article keywords and abstracts.

Step 3. Choose Your Sources

Narrow down your list.

When looking through journals, databases, etc. that show you dozens of articles, you'll need to narrow down your reading list. Begin by reading the titles, and then the abstracts, which gives you more information about the context of the theory or experiment to see if it relates to your topic and if it's worth reading more fully.

Pro-Tip: Start with review papers and meta-analyses.

A review paper is based on other published articles (it doesn't report original research)[2]. These papers summarize the existing literature on a topic, and provide summaries of specific papers you can later track down.

Step 4. Review the Information

Skim articles efficiently.

Reading jargon-rich scholarly articles is no easy task! Once you've identified an article that you want to review in detail, begin by skimming the contents.[3]

1. Fully read the first and last paragraph of the Introduction and the Discussion sections.

2. Read the topics of all tables and charts.

3. After, while you're skimming the full article, try to look specifically for these four things:

   - What are the findings, claims, conclusions of the article?

   - What are the practical implications about the topic you are investigating? (Often discussed at the end of the article in the Conclusion)

   - Did the behavioral strategy being tested work effectively? Why and under what conditions?

   - What were the demographics of the study sample? Does the article suggest whether the findings might be audience or situation-specific?

   - Does the article discuss other relevant studies and articles (summarized in the Introduction)? If so, track these papers down!

Pro-Tip: Leverage the Introduction sections.

Introductions in articles often contain mini-lit review sections. If you're reading a very relevant, recent article (e.g., from the past three years), it's lit-review section will serve as a great jumping-off point for your own review.

Expert Tip: Interpret Results.

You don't need to be a statistics guru to interpret research findings. Here are three key things to keep in mind:

- Was the result statistically significant (p-value < .05)? Significance is a statistical term that tells how sure you are that a difference or relationship exists.

- What was the sample size? Remember that too small a sample size (say, less than 50 people in a study) yields unreliable results. Older studies with smaller samples should be taken with a grain of salt.

- What was the effect size? An effect size is a measure of how important a difference is: large effect sizes mean the difference (say, between two conditions) is important; small effect sizes mean the difference is less important.

Step 5. Summarize and Synthesize

There's no one way to organize a literature review. Here are a few general suggestions:

- Organize your materials. Some of the more commonly-used structures include organizing content by theory, by key insight, by sector, by context-area, by audience type, or by use of research methodology.

- Select only the most important points in each source to highlight in the review. The type of information you choose to mention should relate directly to your research question. In your summary, try to locate your own research question within the context of the existing literature, with a focus on actionable insights and recommendations.

- Once you start to collate your literature review, make sure to reference your sources as you use them. Keep full details of the title of the paper, the authors, journal and year of publication, as it can be hard to track down these details later.[4]

Pro-Tip: Translate findings to actionable insights.

Remember, you may not be able to find sources that completely relate to your research question: The sample used in the study might be different from your target audience, the context might be different, or a suggested behavioral strategy might be beyond your own capabilities. The key is to see if these findings and insights can be translated in a way that can be applied to your own research question or help you develop new hypotheses for future testing.

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[1] For more info on how to use Google Scholar to conduct your lit review, check out this link: https://www.editage.com/insights/8-winning-hacks-to-use-google-scholar-for-your-research-paper

[2] For an example of a meta-analysis, check out this article: https://kops.uni-konstanz.de/bitstream/handle/123456789/10973/06GollwitzerSheer-an_ImplementationIntentionsAndGoalAchievement.pdf?sequence=

[3] For more info on how to read an academic article, including a breakdown of the anatomy of an article, check out this resource: https://www.icpsr.umich.edu/files/instructors/How_to_Read_a_Journal_Article.pdf

[4] For more info on how to cite your sources and create a References section in your lit review, check out this link: https://www.mendeley.com/guides/apa-citation-guide

? **Frequently Asked Questions**

1. What if I come across a paywall?

When you search for articles using Google Scholar, you'll often see direct links to article pdfs. Other times, however, you won't have access due to a paywall. Feel free to email the author(s) directly to request the paper (most will happily oblige!)

2. What if I find conflicting information?

Sometimes, different studies will have different results and conclusions, and offer conflicting insights. This is pretty normal in scientific research. In your literature review, try to organizes cases where an intervention worked (e.g. for this gender, in this location, for this socioeconomic status…) vs. did not work. Give more weight to studies that used a randomized control design, used large sample sizes, or are well cited in the literature.

3. How do I know when my review is done?

Setting a clearly-defined scope will help, as it will focus your search to specific areas. Another indicator of having exhausted the literature on your topic is when you keep coming across similar findings and insights and are no longer uncovering new information.