

ESP 178 Applied Research Methods

Research Proposal Stage 2: Literature Review

Due: 2/5

Length: 3-4 double-spaced pages

Grade: 10% of total course grade

Purpose: Gain experience in looking for and reviewing research articles on a selected topic and assessing their relevance to the research question.

Background: One of the first things a researcher does when developing a research proposal is a literature review. The purpose of the literature review is to assess what is known and what remains to be answered with respect to the research question. The literature review process consists of finding existing studies related to the research question and evaluating them with respect to both research design and findings. The researcher can then build on existing studies in designing her own study but also ensure that she is making a new contribution to the literature.

Task 1: Find 4 to 6 articles

Sometimes the goal of a literature review is to find every academic article published on a particular topic – to assess the breadth of the field. Other times the goal is to find a small number of articles that are directly relevant to the research question and of relatively high quality. In this assignment, you are to do the latter: find 4 to 6 relevant, peer-reviewed, and high-quality articles. See Appendix A for tips on how to find articles, plus don't forget to check the articles in the reader. Think about the following:

Is it relevant? Relevancy can be tricky. Obviously, you should choose articles that are more related to your research question than not. Think broadly here – you may find useful articles on topics that are different from but parallel to yours. Even if you can't find an article that uses the same behavior you're using as a dependent variable, you might find articles on sort of similar behaviors – or maybe on environmental behavior in general. For example, say you're studying factors that influence who fishes recreationally and who doesn't. If you can't find studies on fishing, you might find studies on outdoor recreation more generally. You are looking for articles that can help you:

- Decide what independent variables are relevant for your behavior. For example, a study might show that environmental awareness, income, gender are all associated with the type of outdoor recreation a person chooses.
- Think about ways of measuring your dependent or independent variables. For example, an article might explain how they created an index for environmental behavior or for environmental awareness.

Is it peer-reviewed? Although the search process for a literature review can be similar to the search process for your background research, the goals are different. For the literature review you are looking for academic articles in peer-review journals – like the ones in your reader. The peer-review qualifier is important: it is the review of one's research by one's peers that provides

at least a modicum of quality control. You can generally tell a peer-review journal by its title (e.g. it has “journal” in its title somewhere), but if you are not sure, then check inside of the front or back cover to see if the publishers describe a process for reviewing papers. You may come across several kinds of academic articles: research articles, literature review articles, and theoretical articles. Research articles, which give an overview of research design and results of a particular study, are of the greatest interest, but the others can be helpful, too.

Is it high quality? Quality can be difficult. The quality of an academic journal article is often measured by the number of times that other articles cite it, something you can check through the Web of Science (see Appendix A). However, this approach does not work well for relatively recent articles that simply haven’t had enough time yet to be cited. Researchers generally have an opinion about the relative quality of different journals; you can check with me, the TA, or another professor if you’re curious about the journals in which the articles you find are published. Researchers also often have opinions about other researchers and the quality of the work they do. Most important, however, are the merits of the research itself and the quality of the research design. By the end of the quarter, you’ll be in a better position to judge this for yourself. In the meantime, do your best to sort out the stronger articles from the weaker ones.

Task 2: Write a short report on your literature search

It is important that researchers document the steps they went through in carrying out a literature search, to provide confidence that all relevant articles have been found and so that others can replicate the same process. Write one paragraph in which you report the databases you searched and the search terms you used. Provide a summary of which searches (i.e. combination of database and search terms) yielded the articles that you chose to include in your bibliography. Also explain which searches did NOT prove fruitful.

Task 3: Write an annotated bibliography

For the articles that you choose, write an annotated bibliography. An annotated bibliography gives the full citation for the article (see Appendix B) and then provides a brief summary of key points of the article. For each article, *in your own words*: (i) summarize its main argument, question, or hypothesis (ii) describe the basic research design, including variables, units of analysis, treatment of time, (iii) summarize the methods of data acquisition, (iv) summarize key findings, and (v) explain what you learn from this study that is relevant to your own study. *On this last point, be specific! Don’t just say “It helped me understand what factors influence behavior.” Tell me which factors you learned about!* Each summary should be about ½ page (a sentence or two per item). The Schutt book (both editions) has an annotated bibliography in Appendix A, if you want to see what one looks like. In addition, Appendix B and Appendix C in Schutt (both editions) give helpful tips on questions to ask about a research article and how to read a research article.

Task 4: Refine research question and conceptual model

In addition to the literature review, I'd like you to take another crack at your research question and conceptual model. After doing your research and thinking about my comments on your first assignment, do the following:

1. In one sentence, state your research question or hypothesis
2. Draw a diagram of your conceptual model, showing independent and dependent variables; indicate which of your independent variables you will treat as control variables. ***You must include a diagram!*** Hand-drawn is OK at this point, though you will want to prepare a polished version for your final proposal.

Note 1: Be sure that your question and your model match!!!

Note 2: If you haven't talked to me about your model yet, make an appointment to see me!

Appendix A: How to find articles and information:

Although the Internet provides access to oodles of information these days, the library is still your primary source for academic research. The library's website links you to several important databases that enable you to search for books or articles on your specific topic. These databases now include electronic versions of a large share of academic articles – but not all of them. Start with these databases to search for academic articles. If the database does not provide you with “full text,” then go to the Harvest Library Catalog and search for the journal the article is in. With luck, it will be available either electronically or in old-fashioned print in the library. You might also try www.sciencedirect.com for electronic versions of articles.

UCD Library Electronic Databases to try:

- Environmental Policy Index – a good general index for environmental topics
- Expanded Academic ASAP – a multidisciplinary database that includes academic articles and articles from the popular magazines.
- PAIS International Database – indexes all types of materials in the area of public affairs
- Web of Science (run by ISI Web of Knowledge) – multidisciplinary database that links articles by citations; if you find one good article, you can use this database to search for later articles that cite this article or to find all articles by the same author.
- TRIS Online – the best place to go for transportation research, including academic articles and research reports

Note: Google Scholar is a new resource for finding “scholarly” articles, peer-reviewed and otherwise. It is OK to try this, but be sure that you use try some of the library indexes as well. I have not used Google Scholar very much myself yet, but I am skeptical that it is as effective or as efficient as the traditional indexes – at least for now.

A really useful trick: If you find a really good article, especially a recent one, take a look at the articles it cites. Be sure to consider what the article says about the articles it cites, though – you

want to focus on the ones they talk about in positive terms! Then use the Web of Science database for newer articles that cited your reference. (To actually do this type of search, click "connect" to get to the database, click "full search", and then click "cited ref search". Enter the information about the older article (or book), and the search engine will find newer articles for you that referenced that one.)

Books, research reports, and government reports are also acceptable sources but often harder to use than a succinct article. They also generally go through a more limited peer-review process (if any) than academic articles, so that quality may be more of an issue. Books are most easily found through the Harvest Library Catalog; you'll have to go to the library to get them.

Research reports and government reports may turn up in some of the electronic databases (e.g. PAIS or TRIS) but are often most easily found through a Google search (regular Google, not Google Scholar). Google searches are a good way to find background information on your topic, but you have to use this tool carefully. Not all information on the web is to be trusted! Use the following questions in evaluating what you find on the web:

- Who or what is the author of the website?
- Is the site advocating a particular point of view?
- Does the web site give accurate and complete references?
- Are the data up-to-date?
- Are the data official?
- Is it a university research site?
- Do the data seem consistent with data from other sites?

Appendix B: A few words about citations

Citation format is getting more complicated as more materials become available on-line. The author-date format is used most widely in planning journals (i.e. (author year) in the text, with a list of references at the end of the paper) but other formats are acceptable if used correctly and consistently. My general rule of thumb is that you need to provide enough information that the reader could find the item herself. For things like government reports, this includes the agency, the report number, the date, and, if possible, a phone number or email address for the agency. I suggest using the Chicago, APA, or MLA manuals of style, available through the library (<http://www.lib.ucdavis.edu/instruc/citing/>). You can also take a look at the reading list for the course for an example of an acceptable bibliographic format.