Conducting a Field Literature Review

Diane Bailey

UT Austin, School of Information

2013

What Do We Mean When We Say “Lit Review”?

The term “lit review” means different things in different professional communities. I mean to distinguish between two types of lit reviews that exist in my community of organization studies scholars. In this community, we have what I will call “field” reviews and “tailored” reviews. Tailored reviews are what you place in the front end of a paper to frame your RQ or hypothesis; you cite perhaps 20 or 30 papers as background to establish what the community knows with respect to these questions and to point out a gap in that knowledge. You can polish off a tailored review in a matter of a few months or less. By contrast, field reviews canvass a field to understand where it is, what knowledge it has established, and where it ought to head. When doing a field review, you do not find a single gap, but many, and typically try to steer the field in new directions or close down tired streams of research. For a field review, you might need to read and integrate 60-100 works, if not more. The effort is huge; it can take 6 months to a year, but it can set you up for the next 4-5 years of research, not just for the current paper, as in the case of tailored reviews. You can publish field reviews, but not tailored reviews, as stand-alone articles; in that case, a field review can help establish you as a scholar in your community. For example, two of my three most-cited papers are field reviews. The skills you need to conduct a field review translate well to doing tailored reviews, but the reverse is not true. For many students, field reviews preface their dissertation work, often serving as a qualifying paper. The lit review that appears in their dissertation may be this field review or a review tailored from it to suit the questions at hand.

Why Do a Field Literature Review?

Every research paper in nearly every field requires a tailored review; the tailored review serves as a framing and motivation for the paper. Why spend the extra energy to conduct a field review?

Field reviews, as noted, can set you up for many years of productive research. You will feel confident in your line of inquiry if your field review reveals clear avenues for growth in the field. You will know with some certainty that prior work is incomplete or insufficient, providing legitimacy for a string of new studies. Moreover, if published, a field review can establish your name in the field as a thinker and boost your citation count. My most-cited paper is a field review of the literature on organizational teams; published 16 years ago at a critical juncture in technology, it continues to yield 250 cites per year. By comparison, my most-cited empirical paper fetched only 31 cites in its best year. Additionally, recent events may prompt a field review. Perhaps a technological change has rendered old ways of looking at the literature less useful than before, or new concepts imported from other fields have changed the way scholars think about your topic.

There is, of course, no point in doing a field review if the field is littered with them, or if someone just wrote a good one. You might want to contact an editor before starting off on this endeavor to see if such a paper would be welcome at that journal. Also, beware that if you do publish a field review, editors will turn to you for years to come to review papers in that area, which is great if you persist in the field because you will be the first to learn of new findings, but irksome if you leave the topic.

Searching: How to Find Literature in Your Field or Topic

1. Determine the boundaries or scope of your topic.
	1. Traipse around in the literature a bit and talk to knowledgeable colleagues to determine how broad your scope should be and what boundary constraints you may want to set.
		1. For example, information-seeking behavior may be too broad a topic, information-seeking behavior of the elderly seeking medical information may be too narrow a topic, and information-seeking behavior of the elderly may be just the right size.
		2. You may want to set up boundary constraints that would limit your review certain kinds of studies or certain populations.
			1. You may wish to consider only laboratory studies, for example, or you may wish to exclude laboratory studies, depending on your intent.
			2. Alternatively, you may decide, for reasons that make sense in your context, to include laboratory studies, but to exclude those studies in which the subjects were university students.
	2. Tailor your scope so that you have a body of literature whose findings speak to one another; you want your review to result in general findings, trends, and ongoing problems that apply well across the body of literature and speak to a community of scholars.
	3. Broaden your scope primarily for key theoretical work that might be applicable to your topic.
		1. For example, when reviewing the literature of information-seeking behavior of the elderly, you are likely to want to consider general models and theories of information-seeking behavior.
		2. Most likely, many of your studies will argue that scholars need to tweak these models and theories in some way to fit the population or phenomenon that you wish to study; for this reason, you and your readers will need to be familiar with these general models and theories.
		3. You may later find that you want to organize your review according to some model or theory that is particularly relevant to your topic and sample.
2. If possible, take a doctoral seminar in your field or topic, a tactic that will provide you with a knowledgeable guide and a beginning reading list.
	1. If no doctoral seminar is available, look online for syllabi of doctoral courses in this area.
3. Develop a set of keywords and use them to do a preliminary keyword search.
	1. Use specialized databases first, Google scholar second.
	2. Employ keywords in combination to yield searches with ideally 200 results or less, and then go through each resulting item.
		1. Read paper titles, authors, journal titles, dates, and abstracts.
		2. In some cases, you’ll need to skim the article itself to know if it belongs.
	3. This search will yield perhaps 15 to 20 relevant articles of good quality.
	4. Read them.
4. Quite likely, several papers in this preliminary set of articles will cite prior lit reviews.
	1. If a good recent review exists, examine your purpose in redoing that prior effort.
		1. Consider stopping your review.
		2. Reasons to continue include age of the review, lens of the review, and recent events or phenomenon that challenge the usefulness of existing reviews.
	2. If you persist, revisit papers that other scholars reviewed if your lens is different than theirs or if your timespan overlaps.
		1. If your lens is the same, make careful note of which findings the data supported well and which findings the data supported mildly at the time of the earlier review.
5. Snowball from articles that you found in your keyword search and from prior lit reviews.
	1. Look at who the authors of these articles cite, and capture the most repeated and most seemingly relevant studies.
	2. Consider why these studies did not come up in your keyword search, and modify and repeat that search as necessary.
		1. Often, the answer is because these works are books, chapters in books, or conference proceedings.
		2. Alternatively, these works may not exist in digital form.
		3. Finally, maybe you simply did not have all the right terms in your search.
	3. Get these works, read them, and snowball from them as well.
6. Use citation services to find who has been citing best papers in your collection.
	1. This practice is helpful in finding scholars outside your community or discipline who are writing on this topic and whose perspective may be different from yours.
		1. You may find the work of these outsiders to be not that relevant to your review.
		2. Alternatively, you may gain some credit for being the person who introduces to your field the ideas of these outsiders.
	2. In general, exploring who else is citing the ideas of scholars on this topic helps you consider now (and discuss later) how universal these ideas are, how widely applicable they are, and how potentially important they are.
	3. Be careful not to go too far afield or to consider work that is low quality.
		1. You may need some help from a scholar in another field to know if the work is worth discussing or not.
		2. You might also explore the author’s publication record and citation counts.
		3. Ultimately, you will likely need to draw on your own skills in assessing research quality to determine if outsiders’ work is worth including in your review.
7. Do a TOC search for the past decade or so (longer depending on the topic) of top journals that publish this type of work, based on what you found so far.
	1. This step is tedious, but crucial because it is how you protect against leaks in your keyword search.
	2. Make sure to look at articles printed online in advance and recent articles not captured in archival databases.
	3. For articles older than the period you can manage by a TOC search, use the search tool within the journal itself, with your updated keyword list.
8. Search the publications list (personal web page, Google scholar) of top scholars in this field.
	1. These scholars may have a good publication that is hidden away, perhaps as a chapter in a book or as a keynote address, and that your search missed.
9. Look at the websites of research centers whose members work in this area.
	1. This method is a good way to find working papers that may be in queue for publication, or to get a sense of where the field is headed.
10. Don’t forget books.
	1. In particular, spend time browsing racks.
11. Ask a reference librarian for help, particularly to find specialized databases of which you may not be aware.
12. Sign up for alerts for new articles to capture work that is published while you are reading the corpus that you have collected.
13. Let all your colleagues know that you are doing this review; they may steer you to particular works or keep their ears open for you.

Pruning: How to Remove Work from Your Search That Is Not Worth Your Time

1. Throw out marginal research works.
	1. Ignore works that are not available to your university.
	2. Ignore works that are not peer-reviewed.
	3. Cast off most articles from sub-par journals.
	4. Throw out works that matched keywords, but are off-topic.
	5. Beware works from online journals unless your field has made strong inroads in this medium.
	6. Record how many works you now have.
2. Tag this remainder with levels of relevance to your review, so that you can filter to begin your careful reading, note taking, and organization with only highly relevant pieces.
	1. You may never get to less relevant pieces, but you will probably feel more confident knowing that you have them if you need them than if you toss them.

Organizing: How to Arrange, Record, and Sort What You Keep

1. Begin organizing by placing the studies that you have collected in some kind of citation database like Mendeley, Zotero, or Endnote.
	1. As you enter studies into the database, you may want to tag them.
		1. Most of you are more familiar with the benefits of tagging than I am; I tag in the same way I might use keywords.
	2. Make sure you have pdfs of every item that you can and that the pdfs are linked to the database, so that you all you need to do to view them is to click on the icons.
	3. Also make sure that you have set up the database in a smart way such that if you later rearrange your folders and directories, you won’t lose all the links.
		1. In Mendeley, I think this practice means you have to keep all the pdfs in the Mendeley downloaded papers folder in your user’s data directory.
2. Make careful written notes about each paper that you read.
	1. Some of you may make your notes directly in the pdf; others may write them in the database’s notes area; still others may write them first in Word and then copy and paste them to the database.
		1. Do what works best for you, being mindful that, in this case, you will often want to make comparisons across sets of notes.
	2. For general reading, Nathan Ensmenger’s rule for how much you should write for notes is a good one: Two pages for articles you like, two paragraphs for ones that are just ok, and two sentences for ones you dislike. (Books, of course, require more.)
		1. Because we are doing a field lit review, though, even the bad studies are going to merit more print from you than this general rule specifies.
	3. Your notes for every study should feature complete sentences and paragraphs.
		1. Bulleted lists of nouns or adjectives rarely prove useful months later when you are trying to recall the details of a particular study.
	4. At a minimum, for each study note the theoretical framing that the author employed, the methods, and the findings.
		1. I also note the sample size, with a brief description. I want to get a sense of what types of populations have come under study.
	5. Include your judgment of the value, rigor, and validity of this work.
		1. Is the work important? Why?
		2. Is the work interesting (even if, say, the rigor is a bit low)? Why?
		3. How well received does the work appear to be in the literature?
		4. What surprises or delights you about this study?
		5. What is interesting about where this study falls in the chronology of this literature?
	6. Before you wrap up your reading of each study, review your notes to confirm that they capture the study’s main facts and your impressions of it.
		1. Remember that the only thing worse than having to read 100 or so studies in a body of literature is having to read all of them twice.
	7. Taking good notes is time-consuming.
		1. You may only finish a few papers per day, so make sure you plot your hoped-for versus actual progress so that you can adjust your workload as needed.
		2. After a while, you’ll get better at recognizing bad papers and can read them a bit faster than the good ones whose ideas you want to carefully digest.
			1. Beyond that, there is little you can do to speed up the process beyond bringing on an assistant or co-author, or getting less sleep.
3. In addition to writing notes, consider using a spreadsheet tool like Excel to help you organize and wrap your head around this body of literature.
	1. Include columns for attributes like author, year, journal, method, sample, hypothesis or RQ, theory framework, and main findings.
	2. Spreadsheets are useful because they allow you to sort.
		1. Sorting by method, for example, may help you later when you strive to make sense of this body of work by allowing you to understand how researchers have attempted to answer major questions in the field.
		2. To allow sorting by sample, I typically put sample size (e.g., 10), unit (e.g., individuals, groups, firms), and description (e.g., university students, organizational work groups) in separate columns. I make sure to use numbers for size and to use the same terms for units (always groups, say, not sometimes groups and sometimes teams) so that I can sort on those attributes.
	3. Spreadsheets are also useful because they allow you to view the stripped-down details of many studies in one visual space.
		1. With a glance and perhaps a bit of sorting, you can get a sense of which authors have contributed most frequently to this literature, which journals are the favorite outlets for work, what methods and kinds of samples are common, and the like.
	4. Get extra mileage out of your spreadsheet by noting studies (via a marker in a separate column) that exhibit a particularly good use of a given method or a superb front end or a clever way of presenting findings.
		1. These studies will be templates for you later as you write your own studies and instruct students.

Integrating: How to Make Sense of What You Organize

1. By integration, we mean synthesizing this body of work via some analytical framework that helps organize the studies and highlight what they reveal (as well as what they don’t).
	1. As we said last week, integration is not a step that comes after organization, but one that occurs in step with it.
	2. Via integration, good reviews put forward an opinion, a judgment, a voice, and ideas for where the field might head.
	3. In other words, good reviews are not annotated bibliographies; they do not merely summarize what has been done.
		1. Good reviews are thoughtful and express an argument.
2. You might begin integrating by writing memos of thoughts and ideas that arise as you consider the literature.
	1. Start with a subset of the papers, most likely those you have deemed highly relevant.
	2. Build from notes you made as you read each paper.
	3. Can you separate studies into camps based on these ideas?
		1. You might ask, for example, what are the main questions that this literature seeks to answer? How do studies go about answering them? What have they learned?
	4. Note what the studies have in common in terms of their assumptions, their methods, their findings, and so forth.
		1. Consider carefully the opposite of what these papers have in common; this alternative may be a fruitful new avenue.
		2. Look on the horizon – is there a new law, a new trend, a new technology, a new anything that might invalidate some of the shared assumptions of this body of work?
	5. Now explore how the studies differ.
		1. Are these differences important? Why did they arise? Do the differences mask more important issues or miss clear and compelling alternatives?
3. Start adding in more studies to your emerging framework.
	1. Does it hold?
	2. If not, what changed? Consider the outlet in which the work appeared, the year it appeared, and so forth when considering possible causes of change, such as a shift in paradigm within the field.
4. Try many variations to see which framework, if any, is most useful in terms of providing understanding or characterizing work.
	1. When Susan Cohen and I did a review of the teams literature, we knew in advance that we would focus on empirical studies of teams that included measures of effectiveness and that we would separate studies by type of team: work groups, parallel teams, project teams, and top management teams. Within each type, we would focus on key constructs that scholars had studied, such as autonomy, diversity, and rewards. We organized the constructs according to a generalized model of team effectiveness (a modification of inputs-processes-outputs models). The structure was neither exciting nor novel, but it worked for that community because it followed a cognitive framework that the field knew and accepted.
	2. When Nancy Kurland and I did a review of the telework literature, we didn’t know in advance how we wanted to organize it. Absent a frame, we began reading studies. As we did so, we grew increasingly frustrated with the literature’s inability to answer the questions that lay at its core: who teleworks, why, and what happens when they do? Rather than sweep that frustration under the carpet, we made it the centerpiece of our review by first showing that scholars had only limited answers to these questions, then discussing why that was likely so, and providing new directions to get the field out of that rut. This approach was novel and not a few researchers were offended by our conclusions (or so we heard), but none ever argued against it in print and many subsequent scholars used our argument to support their new empirical inquiries and theoretical attempts.
	3. When James and his colleagues did their review of the FLOSS literature, they took two approaches, one quantitative and one qualitative. Leading with their quantitative approach, they presented the charts that James showed us last time and, in a sense, let the reader draw with them some conclusions grounded in the data about what the field was up to and who was up to it. In their qualitative approach, they organized their summary of the field’s findings according to a framework based on a model of small group performance. Then, similar to what Susan and I did in our teams review, they progressed through the literature construct by construct in the order of the model. The two approaches they employed in their review provided distinct understandings, allowing readers to view the literature in different ways.
5. Ask yourself, “Would a person unfamiliar with this field understand it based on my analysis?”
	1. Also ask, “Would a person familiar with this field believe my analysis and find it useful, interesting, or thought-provoking?”
6. Identify areas that constitute substantive gaps.
	1. Just because no one has studied something does not mean that someone should.
		1. The weakest line of a review is, “Although we know quite a bit about this topic, X remains understudied.” Maybe X isn’t worth the time.
	2. A gap, then, is substantive if filling it would tell us something worthwhile, would change our understanding, or would expand our knowledge in some significant way.
7. Better yet, think about new directions.
	1. Ask yourself why the field has taken the direction it has. What other directions are possible? What might be gained from taking them? How has taking the current direction shaped understandings in a way that has perhaps cloaked other significant aspects of the problem or phenomenon?
	2. In the course of doing your review, mention this field to people who know nothing about it. Ask them what they would be curious to know. Have researchers explored it?
	3. What might this field say to related fields gaining traction currently if only it extended itself in a certain direction?
8. You can find plenty of other examples of literature reviews, including ones closer to your own interests than the ones that James and I did. Here are links to our reviews plus a few others that we thought you might examine for their structure and integrative framework:
	1. Susan and Diane’s review of teams literature: <http://www-leland.stanford.edu/group/wto/cgi-bin/docs/Cohen_Bailey_97.pdf>
	2. Nancy and Diane’s review of telework literature: [http://www.ework.fi/documents/69108/72726/A+Review+of+telework+research+%28656+kb%29.pdf](http://www.ework.fi/documents/69108/72726/A%2BReview%2Bof%2Btelework%2Bresearch%2B%28656%2Bkb%29.pdf)
	3. James and colleagues’ FLOSS literature review: <http://floss.syr.edu/content/freelibre-open-source-software-development-what-we-know-and-what-we-do-not-know>
	4. A comparison FLOSS review by Aksulu and Wade: <http://aisel.aisnet.org/jais/vol11/iss11/6>
	5. A comparison (virtual) teams review by Powell and colleagues: <https://wiki.cs.columbia.edu:8443/download/attachments/1979/p6-powell.pdf>
	6. Paul Leonardi’s review of technology implementation literature: <http://www-leland.stanford.edu/group/wto/cgi-bin/uploads/Leonardi%202009.pdf>
9. Finally, here is a link to the Webster and Watson paper that was mentioned last time about how to do a literature review.
	1. I repeat our caution that you should not take such papers or these notes from me as prescriptive, but merely as guides and ideas of what might be done and how.
		1. For example, I’m a bit leery of this piece for its use of the word “systematic” to describe the search process and the limited number of steps they consider.
		2. In addition, I think good reviews are more than concept-centric. I think good reviews present an overriding framework in which the concepts nest.
		3. I also don’t think that you need to develop new theories or models in a good review, nor do you need to provide propositions. A framework is different than that, and I think a framework is sufficient, particularly when coupled with new directions.
	2. Having said all that, I provide the link at last: <http://www.sis.uta.fi/~pt/TIEA5_Thesis_Course/Session_08_2013_02_11/webster02-AnalyzingPastToPrepareForFuture-WritingLiteratureReview_0.pdf>

Presenting: How to Tell Others How You Integrated and What You Found

1. Discuss how many papers to include.
2. Field reviews are major efforts directed towards a community of scholars, some new to the field, some who have lent to it, and some who have strongly shaped it.
	1. You need to begin your review by laying out basic terms that will speak to all of these scholars. Specify exactly what you mean with each term.
3. Explain your lens, namely, how you intend to view this body of work and what you think this lens will gain in terms of insights.
4. Note how and where you searched for articles and other works.
	1. Tell how many works you found.
	2. Tell what criteria you employed to determine which works to keep and which to toss.
	3. Explain how you evaluated each paper.
5. Present findings according to your integration framework.
	1. Summarize at the end of each section where the field stands with respect to this category or idea.
6. Conclude your paper with a discussion of what you think the field’s main contributions to date have been, where more work is needed, where no more work is needed, and what is on the horizon.
7. Run your good first draft (no grammar, logic, or style problems) past two or three scholars in this field who you know, or, failing that, colleagues in your school.
	1. Ask for their feedback, and don’t be hurt when they don’t write back to tell you how brilliant you are.
	2. Instead, pay close attention to their comments and disagreements.
		1. Did their disagreement arise because they misunderstood something you said? Where do you need to be more precise or clear?
		2. Did their disagreement arise because they do not share your ideas or beliefs? Are they right? If you are convinced you are right, how do you build that logic into your arguments in the paper to keep others from going down this path?