

TEACHING THE LITERATURE REVIEW

Food for Thought, 9/27/07
Writing Across the Curriculum Series
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Literature Review:

Synthesis and critical use of previous research in a specific area in order to identify gaps and opportunities in the research field.

- 1. review article*
 - 2. embedded literature review in . . .
research reports, proposals, IQPs, etc.*
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REVIEWING THE LITERATURE: WHAT STUDENTS NEED TO KNOW

PURPOSES

Why are literature reviews written; what *purposes* do they serve?

FEATURES

What are the distinct *features* of a literature review?

STRATEGIES

How does one construct a literature review? What are some helpful pre-writing and drafting *strategies*?

PURPOSES

Why are literature reviews necessary; what purposes do they serve?

<i>Context of Research</i>	<i>Purposes of the Lit Review</i>
<i>Building Knowledge in a Research Community</i>	<ul style="list-style-type: none">- acknowledge and give credit to fellow researchers- demonstrate current membership in the research community- build on, take advantage of previous work- justify new research by showing how it fits in or fills a gap in the current "research space"- direct readers to relevant resources- update members on current status of knowledge in the field- steer future direction and/or funding of research in a field

Teaching Tips: Purposes of the Literature Review

✓ Have students read historical accounts of scientific developments to track key players and how their studies responded to and built on one another. Include the original published studies, research letters, and/or grants to sketch out the social and rhetorical dynamics of a research community. Tell the story of your own research. Contrast this social and knowledge-building activity with the kind of research they have done in the past.. How are the expectations now different?

FEATURES

What are the distinct features of a literature review?

- Discusses a specific area of research
- Emphasizes most recent developments

- Uses formal citation system (author-date or sequential numbering most common)
- Cites mostly primary sources
- Synthesizes and interprets studies (grouping is common)
- Exposes common and divergent themes, patterns, and findings across studies
(makes general claims to organize the studies)
- Exposes opportunities and gaps in the current research territory, indicating future directions for research or justifying a new study
- Includes background information relevant to audience: *other specialized researchers* (little elaboration); *other researchers, practitioners, funders* (more elaboration)

Teaching Tips: Features of the Literature Review

- ✓ Have students read primary sources in your field—review articles, lit review sections of proposals, and the introduction sections of research reports. Put them in groups and ask them to identify common features of these texts and develop their own definitions of a literature review.
- ✓ Provide students with a sample literature review. Ask them to create a reverse outline of the review, listing the themes, topics, or trends the author used to group or contrast the cited studies.
- ✓ Specify the appropriate citation styles for your field and refer students to handbooks or have them review guidelines in professional journals.
- ✓ Have students analyze VERBS used in sample lit reviews. How do different verbs indicate the strength or certainty of a claim, for example: [Jones (2007) *confirmed* vs. This study *suggested*]? Are verbs like “proved” used? Why or why not? Look at verb tense. References to individual studies often employ PAST tense [Smith (2007) *reported*. . .]. References to currently accepted knowledge in the field often employ PRESENT tense [Communication breakdowns in

the medical encounter *have* multiple causes.¹⁻²]. References to research done over a period of time use PRESENT PERFECT: The causes of illiteracy *have been* widely investigated.²⁻⁶

✓ Choose several citations from the literature review and ask students to explain the function of each. For example, is the writer contrasting one study's findings with another? Demonstrating a variation in methodologies? Using one to bolster the other's findings? How do the cited studies function in relation to the present research the writer undertakes in the rest of the research report? What would be the effect of leaving one of these studies out of the literature review?

STRATEGIES

How does one prepare for and write a literature review?

PRE-WRITING

Identify relevant databases, journals, and key scholars. Ask your professor about seminal studies, journals, and known scholars in the area. To find databases, look on the masthead page of key journals in your field and see where they are indexed. Once you find a relevant article, look at the keywords used to index it, and use those terms in subsequent searches. Keywords often appear under abstracts.

Search efficiently. Focus on most recent research first; limit search dates. You needn't read every word of every article to determine relevance. Read abstracts and article titles; if they seem relevant, skim the Introductions and Findings next.

Search backwards. If you find a relevant study, mine the works cited page for other sources you might consider. Look for review articles on or close to your topic, and mine citations there as well.

Summarize and sort sources. Use IMRD to summarize each article in a table, then determine how you might sort them. Create a notetaking grid to expose similarities and differences across sources. The following questions may help you group the studies:

What types of studies have been done?

What are the common foci of these studies?

What methods have been used and to what effect?

What do we know about this research topic/problem/question to date? Are there a number of major findings that emerge? Which studies support which findings?
 What discrepancies and limitations emerge?

*Example grid and rough notes: Research on the Use and Effects of Illness Narratives
 (note: this is a fictional example)*

Study Findings	Focus/?	Methods	
Smith	Effect of patient-written illness narrative on p-satisfaction	159 of 200 non-trauma patients in ER filled out form in emergency room. 130 completed satisfaction survey while waiting for release or transfer. Collected and read by doc. before interview	Patients who used form reported satisfaction levels 15% higher than control group. <i>Why? Cathartic or did it improve quality of the interview?</i>
Tabby et al.	Incorp. of narrative-eliciting questions in doctor-patient interview. How affect satisfaction; doc's sense of usefulness of info. in	3 PCPs, internal med. Total 60 patients over 18. Sessions recorded, compared to doc notes. Analyzed how much info recorded in chart (T-unit analysis). Doc's assessment survey	Comparison of interview and charts showed only 7% of info actually written into record, but doc's assessment of

	diagnosis/treatment	after patient visit.	usefulness was high—in 59% of cases indicated info was very useful for diagnosis. 20% somewhat. 10% slightly. Satisfaction about equal to control group.
Burke and Doon	Written illness narratives based on researcher interviews; distributed in rounds. Investigated whether info gleaned contradicted/supplemented current diagnosis and treatment plan	Med students trained to construct structured narratives based on interviews with 20 cancer patients in clinic. Typed, one page narratives distributed to care team and discussed in rounds. Researcher attended, interviewed the care team about info they perceived as SURPRISING/CONFLICTING/ TRANSFORMATIVE in terms of treatment or diagnosis	Care teams in 6 of the 20 cases reported transformative information that would influence their course of action; 9 indicated new or conflicting info relevant to the treatment plan.
Sims and Smith	Patient support groups with narrative process—survival rates	352 stage 2 breast canc. patients in 4 clinic sites participating regularly during 1 year treatment phase in clinic sponsored support groups with narrative process. Examined survival rates /expected rating over 5 year period cf.. stage 2 breast c p's who did not attend support group sessions	Support groups had better survival rates
Etc..			

Table makes patterns more visible; students can then create subsequent tables to see trends and patterns and use these in structuring their lit review drafts:

correlation	3 TYPES NARR	OUTCOMES
	Patient Written (PW)	H- Health +pos
	Patient Oral (PO) Collab Written (CW)	S-satisfaction DT-diagnosis/treat
Smith	PW (ER prep)	S+
Coles et al	PW (for canc team)	S+; DT+
Ginger	PW (journaling)	S+
Burke and Doon- a	Background on narrative and health	--
Sieper	CW (rscher)	S+
Canton et a.l	CW (intern)	DT+
Greene	PO (int)	S+
Sims and Smith	PO (support gr)	H+
Kleinman	PO (int)	S+; DT+
Kleinman & Syed	PO (int)	DT+
Ginger & Rose	CW (intern)	DT-
Burns- a	PO (int)	S+; DT-
Burns- b	PO (int)	DT+
Burke	PO (int)	S+
Burke et al.	PO (researcher)	S+
Kaminski & Hogle	PO (int)	DT-
Burke and Doon- b	PW	S+ DT+
Tabby et al.	PO	S—DT+

Summarizing notes for draft: 3 TYPES OF NARRATIVE OFTEN STUDIED. MOST LOOKED FOR EFFECTS ON PATIENT SATISFACTION, PERCEIVED QUALITY OF DIAGNOSIS AND TREATMENT PLAN, AND HEALTH OUTCOMES (SURVIVAL RATES).

Patient oral narratives most common, obtained in interview; some rsch. on written illness narratives, either by patient alone or co-written with an intern or researcher. Narratives used in diff. ways: either for use by care team / by doctor (to supplement patient history) or for personal use (journal writing at home; stories in a support group—writing or storytelling as healing in and of itself).

BENEFITS: Only one study on narrative→ health outcomes (survival rates), but positive correlation found. More research needed here. DIAG/TREAT mostly positive (some mixed), but fewer studies on this than patient

satisfaction. Lots of evidence that narratives are correlated with higher levels of satisfaction. Many studies on this.

Drafting

Make Sure the Draft Covers the “3 Essential Moves”

1. Show the importance of the research area;
2. Introduce and synthesize previous studies to highlight themes and patterns;
3. Point out gaps, unresolved questions, or opportunities to extend previous knowledge.

Move 1: Showing Importance

- Begin by addressing these questions:

How “hot” is this area of research and why? Is there evidence that research in this area can address a serious problem or take advantage of a unique opportunity?

Note: The broader your audience, the more you may need to discuss importance.

- Consider using similar phrasing:

A growing problem with... has led to renewed interest in studies of... / Progress in the areas of... have created a surge in... / Recently... have expressed a growing interest in... / Knowledge of... has become a critical aspect of... / ... has been extensively researched in the past decade due to... / Many recent studies of... have focused on...

Move 2: Introducing and Synthesizing Studies

- Use your grid to develop general claims or points about the research’s foci, findings, or limitations:

Recent research has identified three major causes of this disease: x, y, z. / Two treatments, x and y, show the most promise. / The majority of studies have examined treatment outcomes only in elderly populations, however.

- Foreground general claims/themes by turning them into headings and topic sentences.

- Group studies under relevant headings/paragraphs, using IMRD notes to provide details as needed.

- Connect sections/paragraphs with smooth transitions:

Whereas the previous studies have identified causes of this condition, more recent research (Sanders, 2003; Sanders and Guly, 2004; Bates, 2006; Young et al., 2007) has tested the effectiveness of three new treatments.

- Vary sentence style when introducing sources:

Smith (2002) reported x... / This second-level therapy has been very effective in reducing x (Jones, 2004).

Move 3: Summing up Gaps or Opportunities

Answer these questions:

Is the research reviewed inconclusive/incomplete in some way? In need of extension, or replication? Appropriate only to part of the problem at hand or to a limited number of cases? Sum up these gaps or opportunities, and a) suggest future research to address them or b) explain how the new study you will present "fills" this gap or extends previous research.

Consider similar Phrasing:

Although the bulk of this data supports... it remains unclear... /
Although considerable research has been devoted to... scarce attention has been paid... /
These studies are limited in that... / Nevertheless, these studies have been restricted to... / A much overlooked variable has been... /
Because the findings are inconclusive across these studies... / None of these studies, however, ... / The research has tended to focus on... rather than... / However, this treatment may not be as effective when applied to... / It appears that further investigation would be useful in... / If these results could be confirmed, they would provide strong evidence for... / These developments provide a new opportunity to investigate...

Teaching Tips: Strategies for Writing the Literature Review

✓ Have students locate the introduction to a research article, xerox it, and bring it to class. Working with a partner, they should label the two

articles for moves 1-3 as described above. After locating move 1, they should write down the phrases and types of evidence used to demonstrate the importance of the research areas. If move 1 is absent or barely detectable, they should explain why.

✓ Have the class plan a mini-review as warm up for their own literature reviews. Assign a common packet of 5-6 related research articles and have students create a grid or table that shows how and why they would group these articles in a review. Compare and discuss students' grids in class, choosing one as an effective organizational structure for a lit review.

✓ Assign each student a 1-2 page literature review based on the packet of articles you have given them and the organizational grid the class has agreed upon. In class, have students examine each other's drafts and label the three moves. Have them critique one another's use of in-text citation. Have them note how each writer has transitioned between discussion of the sources or major themes and patterns. Choose one or two good examples to discuss in class the next day.

REFERENCES:

Many of the ideas in this presentation were adapted from the following books. This is a work in progress. If you have more references or teaching ideas, please share them with me!

Bazerman, C. (1988). *Shaping written knowledge: The genre and activity of the experimental article in science*. Madison: U Wisconsin P.

Bazerman is one of the most well known scholars in the rhetoric of science. His historical analysis of the genre points out the social nature of knowledge building in the disciplines.

Penrose, A. M., & Katz, S. B. (1998). *Writing in the sciences*. New York: St. Martin's.

This is a great resource for teaching scientific writing conventions. Chapters on research reports, proposals, conference presentations, and more.

Swales, J. M., & Feak, C. B. (1994). *Academic writing for graduate students*. Ann Arbor, MI: U Michigan P.

Swales has done significant research in the structure of the scientific research report; several chapters in this textbook draw on his research. Geared to second language learners but useful for ALL graduate students, this text covers both sentence level issues and larger writing conventions for academic writing.

A few resources on the library web site that also may be of interest:

<http://www.wpi.edu/Academics/Library/Faculty/projectchecklist.html>
<http://www.wpi.edu/Academics/Library/Help/Projects/litreview.html>
<http://www.wpi.edu/Academics/GPP/Students/ch6.html>