Literature Reviews

What is a Literature Review?

A literature review selects relevant past literature and **CONNECTS, SYNTHESIZES,** and sometimes **EVALUATES** these texts/studies, putting the authors in conversation with each other.

An effective literature review fulfills three purposes:

1) Situates your work within the broader scholarly community - connects your work to the broader field and shows that your work has grown organically from current trends

2) Shows that you have "done your homework" (and builds your credibility) by illustrating your familiarity with the major agreements, debates, and critical findings of of the field

3) Illustrates a "gap" in this previous research—a gap that can be filled by your unique and novel research contribution (see *Novelty Moves* handout)

Most of the literature reviews you will encounter are **introductory sections** to research papers (i.e., proposals, journal articles, theses, etc.), but you may also encounter stand-alone literature reviews that summarize the state of research in a particular field or topic area. It is important to understand the purpose of your literature review so check with a professor or advisor if you have questions.

How Do I Write A Literature Review?

An effective literature review CONNECTS and GROUPS relevant research based on common themes or trends. Each paragraph should discuss one specific trend, *not* one specific author. Literature reviews are not annotated bibliographies: they should not have one paragraph per source unless that source is especially formative to the writer's study.

In general, the **topic sentences** in a literature review should illustrate the connection across multiple studies: the common agreement/disagreement, the similar focus or the related limitation. Below are some common phrases for connecting studies by showing agreement and disagreement

Use the following phrases to highlight **agreement**

- "One trend in the research is…."
- "Research seems to agree that...."
- "Numerous authors support the claim that…."
- "There is strong convergent evidence for...."

Or **disagreement**

- "The evidence on X is mixed for...."
- "There is overall debate regarding...."
- "A lack of consensus exists on the point of…"
- "There are two conflicting camps on the issue of…."

Example Topic Sentences In A Literature Review

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The following topic sentences only summarize one source. They are ineffective compared to sentences that connect multiple studies around one main theme

BEFORE

"The Perils and Promises of Praise," Carol Dweck states that praise has a distinct effect on the way students view intelligence. Through a study done with fifth grade students, she found that students who are praised for their intelligence are less likely to exert effort and more fearful of making mistakes than students who are praised for their process of learning. […]

Summarizes one text

Larry Van Brimner conducted a study at a high school writing center and found that students who received praise or positive feedback on their writing said that the feedback made them want to work harder. Students who received negative feedback, on the other hand, felt angry with themselves for their lack of writing skills. […]

Too many details on single author

Richard Straub's examination of students' response to written teacher feedback found that students were more receptive to feedback that was specific and offered "positive motivation" and/or a "bit of advice" (107). This study suggests that students are most interested in feedback that shows that their professor spent time with their writing, gave it thought, and offered feedback based on that thought. […]

Overexplains individual study

☑

These topic sentences EFFECTIVELY connect multiple studies around a theme:

AFTER

Research has shown that praise is more productive than criticism or negative feedback. Hyland and Hyland note that students who receive positive feedback present more positive outlooks of their writing, while students who receive mostly negative feedback exhibit diminishing motivation. Students in a high school writing center, for example, felt motivated to work harder after receiving positive feedback on their writing (Brimner). In studies of freshmen composition classes, "praiseworthy grading" has been found to support students' confidence and encourage them to take risks (Dragga; Zak). […]

Focuses on trend

Studies also show that praising students for their intelligence is less helpful than praising for their effort; praising for students' intelligence can even be detrimental to young or developing thinkers and writers. Students in a fifth-grade classroom who were praised for their intelligence were fearful of making mistakes and less likely than other students to exert effort to try new class concepts (Dweck). Furthermore, being praised for intelligence can lead students to believe that their intelligence cannot change […] It follows that praising students for being good *writers* is probably less effective than giving specific praise about their effort and written products.

Connects multiple studies

Research on more advanced students have echoed those findings. Straub's study of students' reactions to teacher feedback in a freshmen composition classroom found that students react more favorably to positive or praise comments; students also prefer specific praise over generic comments such as, "good," which is considered too vague and even disingenuous. […] These results align with Dragga's findings, which found that students are unsure of how to improve their writing when they only receive praise. […]

Situates individual authors within trend

BEFORE

Denholm and Sioshansi (2009) compared the costs of (1) a co-located wind farm/ CAES plant with an efficiently used low-capacity transmission line to load and (2) a CAES plant located near load that uses inexpensive off-peak power for arbitrage, with a higher-capacity, less efficiently used transmission line from the wind farm. Avoided transmission costs for co-located CAES and wind in ERCOT outweigh the higher the higher arbitrage revenue of load-sited CAES at…

Summarizes only one study

Greenblatt et al. (2007) model CAES and conventional gas generators as competing technologies to enable baseload wind power. The wind/CAES system had the highest levelized cost per kWh at an effective fuel price (the sum of natural gas price and greenhouse emissions price) of less than $9/GJ ($8.5/MMBTU). The wind/CAES system had a lower short-run marginal cost, rendering it competitive in economic dispatch and at greenhouse emissions …

Doesn't relate to current study

DeCarolis and Keith (2006) optimize the use of simple and combined cycle gas turbines, storage, and widely distributed wind sites to enable large-scale integration of distant wind resources. They find that diversifying wind sites produces benefits that outweigh the ensuing transmission costs, and smoothing due to wide site diversity renders CAES economically…

Only one study discussed

Each of the above studies uses simulated wind power data or a power curve applied to measured wind speed data. Denholm and Sioshansi (2009) use hourly electricity price data from Independent System Operators (ISOs), while the other two studies examine the cost-effectiveness of storage for wind integration and make no assumptions about electricity price. We examine the economic and technical feasibility of a wind/CAES system in Texas, using wind power data from a large wind farm in the central part of the state, hourly electricity prices .…This research differs from previous work in that it examines CAES as a means of wind power integration in a specific location and incorporates a multiparameter optimization of the wind/CAES system, transmission, and dispatch strategy.

Data dump

No connecting sentence after data dump, forcing the reader to reread

AFTER

Due to the sensitive nature of passwords, acquiring high-quality password corpora for analysis can be difficult. Data sets that were used in previous work on passwords have all been non-ideal in at least one dimension.

Summary of research trends

A review of the literature shows that many researchers use password corpora collected from various security leaks [14, 24, 26, 35, 53, 55]. These corpora tend to be very large (tens of thousands to millions), and they represent in-use pass-words selected by users. While this approach has many benefits, these passwords come with no contextual information about how they were made or used, and the released lists are difficult to verify. Furthermore, the largest leaks thus far have come from low-value accounts with weak password-composition policies, such as the RockYou gaming website. In addition, if the password file is encrypted or hashed, only those…

Research trend

Assesses limitations of previous research

On the other hand, there is an extensive literature that describes researchers asking users to self-report password information, including both password composition details and user sentiment information, instead of collecting passwords expressly for an experiment [7,33,37,47, 49,58]. While self-reported data can be very useful and can provide a lot of context, it cannot always be considered reliable, particularly with regard to a sensitive topic like passwords.

Research trend

Assesses limitations of all previous research

Finally, a small number of researchers have been able to work with large organizations to collect authentic data. Florêncio and Herley used an opt-in component of the Windows Live toolbar to collect … Bonneau worked with Yahoo! to analyze plaintext passwords … Both studies include very large, reliable samples, as well as good contextual information. Due to security concerns, however, in both studies researchers were able to record only extremely limited information about the content of the passwords, precluding many…. In contrast, our paper connects information about each user with analysis of that user's plaintext….

Research trend

Indicates method weakness with all studies

Connects to current study

In this paper, we overcome many limitations of past studies. Our password corpus includes more than 25,000 real passwords, created by users for frequently used, high-value accounts unrelated to our research context. We have indirect, yet extensive, access to plain-text passwords, allowing us to perform more complex and thorough analyses than was possible for other similarly authentic corpora.

Illustrates how current study overcomes limitations of previous research