

Review of Literature

Typical complaints of referees:

The author has not made it clear why some references are mentioned. They appear to be there just to make the paper longer (in which they succeed perfectly) and seem more important (in which they fail), rather than as support for the author's approach.

How should I structure my Review of the Literature?

A Literature Review generally answers the following questions, and generally in the following order. You can use the answers to these questions to structure your Literature Review.

1. What are the seminal works on my topic? Do I need to mention these?
2. What progress has been made since these seminal works?
3. What are the most relevant recent works? What is the best order to mention these works?
4. What are the achievements and limitations of these recent works?
5. What gap do these limitations reveal?
6. How does my work intend to fill this gap?

How should I begin my literature review?

How can I structure it to show the progress through the years?

Below is an extract from the Introduction to a paper entitled *The Effects of Feedback and Attribution Style on Task Persistence* where psychology student Chris Rozek begins his review of the literature:

Persistence has most often been studied in terms of cultural differences. Blinco (1992) found that Japanese elementary school children showed greater task persistence than their American counterparts. School type and gender were not factors in moderating task persistence. This left culture as the remaining variable.

Heine et al. (2001) furthered this idea by testing older American and Japanese subjects on responses after success or failure on task persistence. Japanese subjects were once again found to persist longer (in post-failure conditions), and this was speculated to be because they were more likely to view themselves as the cause of the problem. If they were the cause of the problem, they could also solve the problem themselves; although, this could only be accomplished through work and persistence. Americans were more likely to believe that outside factors were the cause of failure.

These cultural studies hinted that task persistence may be predictable based on attribution style. A later experiment showed that attribution style

and perfectionism level can be correlated with final grades in college-level classes (Blankstein & Winkworth, 2004).

The first sentence of the first paragraph introduces the main topic (cultural differences), and the rest of the paragraph briefly reviews a major study on this topic. The implications of this study (culture as the remaining variable) are summarized at the end of the paragraph.

The first sentence of the second paragraph then moves on to the next (in chronological terms) major study. Chris summarizes Heine's work in a way that involves the reader: he uses the verb *speculated* and then continues the next sentence using *if* which gives an example of this speculation. The first sentence of the third paragraph summarizes the findings of the first two paragraphs in order to introduce some more recent findings.

Note also his use of tenses. In his first sentence, which is a very general overview, he uses the present perfect. Then when he talks about the work of specific authors and makes a summary of each step in the chronology of the literature he uses the past simple.

Chris's structure is thus:

1. introduction to topic
2. support from the literature
3. mini summary
4. introduction to next topic. And so on.

This technique works very well because it tells a story - it is a logical build up to the reason behind Chris' investigation that readers can easily follow. In fact, the final sentence to his Introduction begins: *Because of these findings, I hypothesize that* Chris has gradually prepared his readers for the focus of his work: his own personal hypothesis regarding persistence.

What is the clearest way to refer to other authors?

Should I focus on the authors or their ideas?

There are various styles for making reference to other authors. The four styles below contain the same information, but the focus is different.

Style 1 *Blinco [1992] found* that Japanese elementary school children showed

...

Style 2 *In [5] Blinco found* that Japanese elementary school children showed ...

Style 3 A *study* of the level of persistence in school children *is presented by Blinco [1992].*

Style 4 A greater level of persistence has been noticed in Japan [5].

In Style 1, the author, Blinco, is given as much importance as what he (i.e. Blinco) found. You might choose this style for one of three reasons: (i) it is simply the easiest style to use and the most readable for authors, (ii) you may want to focus on the author more than what he/she found, (iii) you may want to compare two authors (e.g. *While Blinco says X, Heine says Y*).

Style 2 is similar to Style 1, but in this case perhaps you are talking about more than one paper by Blinco, so in this case the paper is the most logical first element in the sentence.

In Style 3, what Blinco found is more important than the fact that Blinco found it. This is a very typical style, but inevitably involves using the passive, which then leads to longer and heavier sentences. In Style 4 Blinco is not mentioned at all, but only a reference to his paper in parentheses.

The style you use will depend on your goal of communication. In fact, Chris Rozek's Introduction above uses two styles: Heine et al. (2001) furthered this idea by testing ... can be correlated with final grades in college-level classes (Blankstein & Winkworth, 2004). He does this to change the focus from author to findings and to create variety for the reader.

What tenses should I use?

The present simple (S1) or present perfect (S2) are generally used to introduce the literature review.

S1. In the literature there *are* several examples of new strategies to perform these tests, which all *entail* setting new parameters [Peters 1997, Grace 2004, Gatto 2005].

S2. Many different approaches *have been proposed* to solve this issue. Use the present perfect again to refer to ongoing situations, i.e. when authors are still investigating a particular field. Even though specific past dates are mentioned in S3 and S4 below, these dates are part of a series of dates that describe situations that researchers are still working on today and will continue in the future. This means that past simple cannot be used in any of these three cases.

S3. Since 1998 there *have been* many attempts to establish an index [Mithran 1999, Smithson 2002], but until now no one *has managed* to solve the issue of S4. As yet, a solution to Y *has not been found*, although three attempts *have been made*. [Peters 1997, Grace 2004, Gatto 2007]. S5. So far researchers *have only found* innovative ways to solve X, but not Y [5, 6, 10].

In S3–S5 note the underlined words. These are adverbials of time that are typically used with the present perfect because they indicate something that began in the past (i.e. when research first began in this area) and continues into the present. They represent unfinished situations. You must use the past simple when:

- The year of publication is stated within the main sentence (i.e. not just in brackets)
- You mention specific pieces of research (e.g. you talk about initial approaches and methods that have subsequently probably been abandoned)
- You state the exact date when something was written, proved etc.

In S6–S8 below we are talking about completely finished actions, so the present perfect cannot be used.

S6. The first approaches *used* a manual registration of cardiac images, using anatomical markers *defined* by an expert operator along all images in the temporal sequence. Then in 1987, a new method *was introduced* which ...

S7. This problem was first analyzed in 1994 [Peters].

S8. Various solutions were found in the late 1990s [Bernstein 1997, Schmidt 1998]. In all other cases, the simplest solution is to follow the style of the examples below.

S9. Lindley [10] *investigated* the use of the genitive in French and English and his results *agree* with other authors' findings in this area [12, 13, 18]. He *proved* that ...

S10. Smith and Jones [11, 12] *developed* a new system of comparison. In their system two languages *were compared* from the point of view of ... They *found* that

....

S11. Evans [5] *studied* the differences between Italian and English. He *provided* an index of .. He *highlighted* that ...

In S9–S11 the first verb introduces the author and is typically used in the past simple. Other similar verbs are, for example: *examine, analyze, verify, propose, design, suggest, outline*.

Note that the first verb in S9–S11 could also be in the present simple. However, generally when the present simple is used the construction is slightly different:

(S12): first the reference and then the author.

S12. In [5] Evans studies the differences In any case, even in S12 the simple past (*studied*) would be fine. The second verb in S9–S11 describes what the authors found. In S9 *agree* is logical because Lindley's findings still agree today with the findings in the papers referenced at the end of the sentence. In S10 and S11, both past simple and present simple are possible. However, it is common to use the present simple when describing how a system, method, procedure etc. functions. In S10 the present simple underlines that Smith and Jones are still using their system and that it is still valid. The use of the past simple (*were compared*) in S10 would probably imply that Smith and Jones' system is not in use anymore and it was just a step in this road of research that has subsequently been superseded.

The third verb in S9–S11 indicates what the author managed to do (*find, obtain, prove, demonstrate, highlight*), and typically such verbs are used in the past simple (*found, obtained* etc.). Again, however, some authors use the present simple in such cases. Use the present simple to discuss previously published laws, theorems, definitions, proof, lemma etc. Such published work is generally considered to be established knowledge and the use of the present simple reflects this.

S13. The theorem *states* that the highest degree of separation is achieved when

S14. The lemma *asserts* that, for any given strategy of Player 1, there is a corresponding ...

How can I assess the quality of my Literature Review?

To make a self-assessment of your Literature Review, you can ask yourself the following questions:

- Have I mentioned only what my readers specifically need to know and what I will subsequently refer to in the Discussion?
- Are the papers I have mentioned in a logical order? Is it clear why I have chosen these papers and not others?
- Have I selected a disproportionate number of papers from my own country?
- Have I removed any redundancy when reporting the literature?
- Have I used tenses correctly? present simple (descriptions of established scientific fact), present perfect (at the beginning of review to give general overview; for past-to-present evolutions), past simple (when specific dates are mentioned within a sentence; for the verbs that introduce an author's findings).