

# 8

## The Literature Review



### developmental objectives

By applying the strategies, doing the exercises and following the procedural steps in this chapter, you should be able to:

- Appreciate the purpose and functions of a literature review.
- Identify strategies for locating material for review, managing the reading, critically appraising the literature, processing information to facilitate writing, and avoiding typical shortcomings.

To reduce the challenges typically associated with literature review production, the writing needs to gestate in the search, reading, critical appraisal and information-processing stages. As with all academic writing, however, you first need to be clear about the purpose and functions of this type of writing.

### Purpose and functions of a literature review

Dena Taylor's description captures well the essential purpose of the literature review:

A literature review is an account of what has been published on a topic by accredited scholars and researchers. ... In writing the literature review,



your purpose is to convey to your reader what knowledge and ideas have been established on a topic, and what their strengths and weaknesses are. As a piece of writing, the literature review must be defined by a guiding concept (e.g., your research objective, the problem or issue you are discussing, or your argumentative thesis). It is not just a descriptive list of the material available, or a set of summaries. (undated)

In short, an 'effective review creates a firm foundation for advancing knowledge' (Webster and Watson, 2002: xiii).



### key points

The literature review provides a rationale for your research in terms of what has gone before, a justification of its value and significance.

### Writing tasks engaged

In order to fulfil the purposes of a literature review, you will engage writing tasks of the following types (depending on the nature of your research):

- Demonstrating through engagement with the literature that you have a thorough critical understanding of the literature. That is, you will be critically appraising strengths and weaknesses of the literature relevant to your own research.
- Pointing out gaps in the literature, identifying problems remaining to be solved or issues needing to be addressed and so forth.
- Drawing together the main themes and arguments of a particular body or bodies of literature.
- Developing arguments in the process of reviewing the literature.
- Showing how your research fits in with what has already been done so as to justify its value and communicate the nature of your contribution (sometimes occurs in a separate section).

### Review mode and orientation

With a formal literature review, review mode means moving from review of the literature to points being made in building your arguments, like so:

(**From:** review of literature) → (**To:** points abstracted from the review to develop your discussion)

In short, keep your eye firmly on the literature when writing your review.

All literature reviews have a strong research orientation in that they engage the relevant research and show how the individual student's research fits in. Your review could have a dual orientation, however: research and practical or professional. While developing arguments is standard practice in the process of reviewing the literature, producing a sustained argument throughout is more common in those reviews with a strong professional orientation. Definition and determination of interventions with the 'most beneficial impact' would obviously require sustained argument, as was indeed the case for this student:

*This paper reviews some of the epidemiological literature on the high prevalence of non-insulin dependent diabetes mellitus (NIDDM) among Aboriginal and Torres Strait Islander People, and on the aetiology of diabetes in these communities. After examining the differing accounts of aetiology these are related to the interventions they suggest. The aim of the paper is **to define the kinds of intervention that will have the most beneficial impact**. Answers to these questions are sought in accounts of both cause and of action (our emphasis).*

Model yourself on this writer, who managed to avoid the trap of developing a thesis (as in argument) supported *from* the literature (more like a formal argument as discussed under → 'Research essays', Chapter 5), unless your lecturer requests this. Rather, let your point of view emerge from review of the literature itself – keep the literature in the foreground.

With an appreciation of what a formal literature review is, a next step might be to locate appropriate material.

### Exploiting library and Internet resources

There are two main sources for academic literature: your institution's library and the Internet. You may tend to rely on the Internet as your primary source for scholarly materials because you are uncertain about how to use library databases. The problem with this strategy is that you can easily spend more time evaluating items for scholarly validity than you did in finding them. Even using Google Scholar cannot guarantee that the sources you track down are suitably academic in nature. Your institution's library, on the other hand, holds material that is almost certain to be scholarly and/or peer reviewed.

#### Your institution's library

Today's libraries hold more than just paper monographs and journals. Increasingly, digital assets are becoming a core component of any library's

collection and many of the latest journals and even some reports are *only* published electronically. Because of the wide variety of formats that academic material is published in, it is essential that you know your way around your institution's library collection, catalogue, and, in particular, the specialist databases that help you search for materials.

Most libraries offer tours of their collection that can be finished in an hour or so, and it is in your best interests to sign up for, or attach yourself to, just such a tour. Alternatively, there may be a virtual tour offered that you can take in your own time. At the beginning of your degree or course, it would also be wise to attend any library workshops on how to make the most of the catalogue or on how to find research materials in your discipline or subject area. Subject and/or graduate specialists usually facilitate these workshops, and there is nothing better than having access to an expert.



### key points

Gaining a solid understanding of your library catalogue early on can save you hours of frustration when it comes to locating the relevant literature.

Many students do not use the library to its full potential. Some focus solely on the physical assets they can pull off the shelves when, to reiterate, many scholarly materials these days are *only* published in electronic format: not to explore them could mean that you are missing out on the latest developments and ideas in your area. Other students do not visit the physical collection at all, preferring instead only to search for digital holdings that they can read or print out via their own computer. Although you might find the latest materials on your topic, this approach could impact on your ability to track the provenance of an idea, which, in turn, prevents you from demonstrating full engagement with the literature.

You should aim to be a fully rounded researcher when it comes to using your institution's library.



### key points

Be aware that searching on the Internet is not the same as searching your library's electronic catalogue.

## The Internet

Regardless of the limitations previously mentioned, the Internet can be a useful tool to help you locate thought-provoking articles or unusual perspectives or ideas that could help you expand your critique of the literature.

**Google Scholar** is, perhaps, the most obvious and frequently used source for searching for academic literature on the Internet. When you use Google Scholar, an underlying algorithm makes a 'best guess' as to whether or not a source is scholarly. It is then up to you to evaluate the source for academic authority. A Google Scholar search will, nevertheless, likely unearth a number of useful or interesting citations that you can follow up.

Do not limit yourself to Google Scholar, however. A large amount of scholarly material is now being published and aggregated in other digital formats, all of which are searchable via tags or search boxes. Many scholars, for example, keep **blogs** that can be searched for both links to useful material and for different angles on the literature (you can find blogs using Google's blog search). **Twitter** can also be a worthwhile source for current literature, not least because many Twitter users assiduously share links to reports and journal articles. Academics are also sharing their slideshows and PowerPoint presentations on services such as **Slideshare.net**, a quick search of which might provide a number of potentially useful citations. Searching people's **online bookmarks** can also be profitable: find a user on Delicious.com or Diigo.com who has similar interests to your own, and browse their bookmarks. The chances are that they have a number of 'favourite' sites that are also relevant to your own research.

Do remember though, that although these sources might provide stimulating or provocative material, none of them can be guaranteed to be peer-reviewed. You should not rely only on Internet searching for finding scholarly material, no matter how difficult using the university library might at first seem.

If you are enrolled in a lengthy research degree, you will need to do search 'updates' until submission of your thesis so as to ensure that you have not missed any relevant later publications.

## Strategically managing the reading

The extent of coverage will of course depend on the level of your degree, and the nature of your research. For a **longer thesis**, you will need to provide

a comprehensive review of all relevant literature, perhaps even an encyclopaedic one if that is required. For a **shorter thesis or report**, you will at least need to (1) focus on key writers in the field (you may not be able to survey all writers in the field, so limit your coverage to those authors who have contributed significantly to developing the research field); and (2) cover the most recent, relevant publications available. But do consult with your supervisor about expectations of coverage.

You may be working with a scant literature, the challenge being to critically evaluate that literature to show precisely what has been done, what has not been done, what gaps you will be filling and why it is useful or important to do so. Or, in having a clearly defined project in hand, you may be working with a localized, contained literature, where the challenge will be to situate that body of research in a broader knowledge base.

Or you may be in the situation where, having just started your research degree, you have not yet identified a research topic to work on. In this case, you will be reading for different purposes: (1) early stage skimming (see → 'Reading intensively and skimming' in Chapter 2 to discover what is going on in the literature or bodies of literature around your subject, and perhaps to identify a suitable topic for research (directions for future research in the conclusions of recently passed theses are also worth checking); (2) more focused reading to refine your project; and (3) intensive reading while appraising sources directly relevant to your project. Each of these reading modes, which you might find yourself circling more than once, is now discussed a little further.

### Discovery mode

It is not a good idea to take detailed notes while in discovery mode, as you are just trying to gain a solid overview of what is going on in the literature to find out where you can slot in. So, most likely you are skimming across a great deal of material.

Still, in this stage you will be developing an appreciation of how the bodies of knowledge around your subject have evolved over time. So, begin generating useful categories. You can group studies around anything potentially relevant to your research: procedures, theories, models, methodologies, topics or themes of interest (perhaps in different settings), or whatever complements your (potential) research interests. Doing this will help you to partition information in a meaningful way and keep track of sources you may wish to return to later for closer scrutiny. You could try brainstorming or mind-mapping categories (see → 'Visual mapping of material' in Chapter 4) to break these down into further blocks of reading.

### Refining mode

If you are in a research area where you are conducting on-going tests or experiments, perhaps over 1–2 years, so as to pin down your research, then the set of refining questions provided in Box 8.1, which can be used to progressively refine your topic or project when reading in terms of focus, purpose and method, may be less useful.

Otherwise, keep writing down your answers to these questions during reading. Your answers will surely change as you progress further in the literature, thus deepening and refining understanding of your subject.

#### box 8.1 Refining questions

**Value and contribution:** Why is it important to be undertaking this research at the level of your research degree? What is the nature of the contribution you expect to make to research/practice?

**What? (Research focus):** What precisely is your topic of investigation? Or what precisely is the focus of your research project? What exactly will you be doing? What work will you carry out?

**Why? (Research purpose):** Why are you covering this topic or doing this work? What is the big question driving your research enquiry? Or what precisely is your primary objective? If you have hypotheses, how do these relate to your primary research question or objective? What are the subsidiary questions or objectives underpinning your research? Jot these down too as they occur to you.

**How? (Research approach):** How are you going to conduct the research: Methodology? Modelling? Theoretical framework? Fieldwork? Data-collection instruments? Experimental or test procedures? Archival research? Other? What is the justification for taking that approach? How will this approach help you to achieve your research goals?

### Appraisal mode

The more you refine your topic or project, the easier it is to identify material directly relevant to the subject under investigation. You will now be engaging with your material in a fully critical fashion (see → 'Critical appraisal of the literature' below).

Skimming does occur in the third stage, as it is not always easy to tell from an abstract or an introduction whether a source, or parts thereof, is relevant, or to what extent it is relevant. You do not want to waste time reading, for

example, a 30-page article when only a few pages are directly relevant. Finding a good balance between skimming and reading intensively is aided by reading strategically.

Do think carefully about the *types* of information you want from more focused, intensive reading before setting out. You will not know the details of what will be found until you do the reading, but this should not curtail thinking through what you hope to gain from reading intensively any particular source.

## Critical appraisal of the literature

Full critical engagement with the literature is a requisite of all literature reviews. Avoid either describing the literature when you write or becoming a detached observer, presenting a wonderfully complex vision of a world (the literature), which, exciting though it may be, floats free from your own research. If you are unpractised in critical appraisal, refer to the 'Critical appraisal checklist' in Box 8.2, which details practices that govern a critical approach to the literature when reading and taking notes (see also → 'Treating information critically' in Chapter 2).

### box 8.2 Critical appraisal checklist

**Develop an overview of the status of knowledge around your subject:** What is known? What is not known? What do we think we know? What do we think we do not know? What seems to be contradictory, contested, problematic, uncertain or incomplete in the literature? Critical information of this type may need to be finely discriminated when writing your literature review.

**Keep a balanced perspective:** Identify what is useful in the studies under review: the strengths that you can build on, as well as any problems or gaps you encounter. Critical appraisal always involves due acknowledgement of other scholars' contributions, as well as criticisms of their work.

**Remain open minded:** Even when you think you know the answers, remain open to other possibilities as you explore the literature. Doing this will ensure that you do not miss important information that suggests you need to qualify, reshape or even abandon a position you hold. In short, it is not a good idea to approach the literature with the sole objective of finding information that will support a predetermined position or thesis, which unfortunately does happen.

**Maintain a healthy scepticism:** Probe for biases, problems, etc. How robust is the design of the research? Think carefully about theory, methodology, modelling, as all will influence authors' interpretations. Any problems with the approach: design principles, test or experimental procedures, data collection processes and instruments used, etc.? Examine terms and concepts; use specialist dictionaries/reference works if needs be. Definitional clarity is vitally important in all academic communication. Are there any problems in this regard?

**Identify and evaluate key debates and issues:** Raise questions as you read, lots of them: What do the important debates centre on? What are the key issues? Who are the key figures in the debates? To what extent do authors agree/disagree and why? How strong are their arguments? How good is their evidence? How sound are their interpretations of data presented? What do you think and why? Take notes on where you stand and why, any ideas you are developing and evidence to support them, which is so important when it comes to writing the review.

**Map authors' viewpoints:** Draw mind maps, graphs, whatever suits you to plot similarities and differences in authors' findings. It is not enough to show what these differences amount to in your literature review. You may need to explain what accounts for such differences, or provide possible reasons for these. One place to begin looking for explanatory reasons is in the design of the research. How robust is the design?

**Position your research in relation to the literature:** Are there problems inviting resolution? Issues that need revisiting? Changing circumstances that demand attention? New perspectives that could alter our understanding? Advances that need to be made? Research gaps that beg to be filled? Or what? How does your research fit in? Identify where you stand and why, and take notes to this effect.

## Processing information to facilitate writing

It is a mistake not to give due consideration to whether or not the methods you use to process and store information will facilitate the writing of your literature review. You should not leave thinking about how you are going to develop and structure your review until you come to the writing. A number of suggestions for processing are now offered, but do discuss this matter with your supervisor, other academics, and students further progressed in their degrees, as they may offer more appealing suggestions.

### Processing information

Useful as it is for identifying needed information, **key word searching** of imported databases is no more a processing strategy involving critical appraisal than is highlighting text when you read.

#### Annotating texts

Jotting down your ideas, thoughts, queries, uncertainties, etc., and perhaps summarising key points at the front of a paper you are reading is a sound processing strategy. Strategies of this type may suffice if the literature is contained, perhaps only 30 papers or so, but will need to be supplemented by more global strategies where the literature is extensive.

#### Category indexes

These allow you to group related sources while documenting summary critical responses to source material, and often appeal to students writing more unstructured theses in the arts and social sciences. Students have used electronic tools such as Evernote, Mendeley, Zotero, Word, Excel, and EndNote to build these, while others prefer boxes of index cards. You may want to build one or a number of indexes around key concerns of your research, as for example, themes, ideas, concepts, methods, etc. (see → the hypothetical illustration in Figure 8.1).

BIBLIOGRAPHICAL INDEX	THEME CARD INDEX: EUTHANASIA
<p><b>Brown, P.Z.</b> (2006) 'Living to die: debating moral right'. <i>Philosophy Today</i>, 12:4, pp. 234–65.</p> <p>Include your own evaluative comments (perhaps in relation to ideas of other authors), plus any direct quotations or paraphrases of interest.</p> <p>Also note whether or not you have photocopied the whole or parts of this article.</p>	<p><b>Brown, P.Z.</b> – philosophical approach to the morality of Euth. practices – very good.</p> <p>Chin, K. – see bibl. for direct quotes (interesting case studies).</p> <p>Parker, T.Q. – dilemmas facing medical practitioners – 'medical' issues well covered.</p> <p>Paque, J. – unusual angle on supporters of Euth. – (yes – see paraphrase on bibl. reference).</p> <p>Smith, S.T. – weak challenge to Parker.</p>

FIGURE 8.1 Indexing different types of information

#### Critical reading reports

These reports are like mini-literature reviews of only a few pages that are built around, say, four or five papers (often with competing views) on some specific aspect of your subject. These reports have distinct advantages: they help build confidence and reduce anxiety through practice; provide early feedback on where improvement might be needed; are an antidote to vagueness, as writing forces you to think through material; can contribute to agenda setting for meetings with supervisors about where your research is going, ideas and challenges; and, most importantly, will feed into the writing of your literature review.

Even though some reports may be abandoned as your research changes direction, the act of writing can speed up the project refinement process by filtering out what you do not want to get into while focusing your evolving interests.

#### The matrix method

This is a popular method in a number of research areas, particularly where evidence-based research is the norm. Useful as matrixes are, they sometimes read like an index or quantitative summary of papers in the literature with little or no actual processing unless this is deliberately built in, which is easy enough to do. Google 'the matrix method literature review' to find an example (see also → 'Further resources').

#### Software

If you are technologically inclined and enjoy using computer software, read the interesting article by Silvana di Gregorio (2000), which notes different software packages, and discusses the analytical advantages of using NVivo for the literature review. NVivo allows for deep-level analysis of qualitative data. If your work is more quantitative in nature, then there will likely be specific software designed with your disciplinary purposes in mind. Check with your lecturer, supervisor or lab colleagues to see which software is used in your department, which may help you analyse data for your literature review. Online software, such as Evernote, Zotero and Mendely can also be used for this purpose, but only if you use tags particularly well.

### Processing and structure

During reading, processing and storing of information, bear in mind that the nature, design and objectives of your research will have a shaping influence on how you structure your review. The following discussion of different options illustrates the interconnection between students' approaches to structuring, their specific research interests and how they processed their information for easy retrieval.

#### The chronological approach

Reviewing the various studies, or groups of studies, in order of their appearance in time could be appropriate, say, for example, if it proved necessary for your research to chart, in some detail, technological or theoretical advances made over a period of time.

#### Key themes, concepts, issues or debates

It may be appropriate to organize your review around key themes, concepts, or indeed key issues or debates, as this student did:

*The purpose of this detailed review of the major debates surrounding market reform is to isolate a specific set of issues relating to policy development and implementation, the key focus of this dissertation.*

Even then, your structure could be further influenced by the way in which the research field itself has developed, as signalled below by another student:

*As these issues are discussed separately in the literature rather than being held in relation, I follow this practice in my Review.*

### The methodological approach

Or it could be that methodology is the over-arching interest of your research, as was the case with the literature review chapter of a doctoral thesis that had only four main subdivisions. Each lead sentence of each subdivision clearly stated that a different aspect of methodology would be addressed, and why this was being done in the context of that student's research goals.

## Shortcomings in reviews

Sometimes, even generally well-written reviews can display shortcomings of the following type in one or more areas.

### Reader processing needs

As with all academic writing, you need to take care not to frustrate or alienate readers. Experts in the content they may be, but you still need to assist them to follow the aims and organization of your review by contextualizing your discussions where needed, and including adequate signposting. (See also → 'Attending to readers' needs' in Chapter 3.)

### Contrary findings in the literature

When writing a review, it is insufficient to simply note differences in findings; you need to explain them. An explanation may not be self-evident, so probe deeper – start with design of the research. Below is an example of a student explaining contrary findings in her review:

*These contradictory findings are indicative of differences in the assumed engine of growth. X and Y assume it to be capital per worker, whereas the empirical paper assumes it to be labour force participation: that is, the quality of workers and quantity of workers respectively. (Economics)*

### The all-important: 'So what?'

As in all parts of the thesis, in the literature review you need to draw out the implications of your discussions, as this student does: