HOW TO DO YOUR LITERATURE REVIEW

GARY THOMAS

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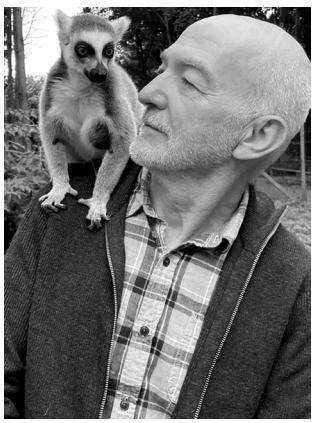
CONTENTS

ABOUT THE AUTHOR



Being of a nervous disposition as a child, Gary Thomas (on the right) failed to write anything on his 11-plus examination paper, which inaction took him to secondary modern school. His subsequent zigzag through the education system gave him broad experience of its good and bad sides.

He eventually became a teacher, then an educational psychologist, then a professor of education at the University of Birmingham, where his teaching, research and writing have focused on inclusive education and the methods used in social science research. He has led a wide range of research projects and has received research funding from the AHRC, the ESRC, the Nuffield Foundation, the Leverhulme Trust, the Department for Education, charities such as Barnardo's, local authorities and a range of other organisations. He has written or edited 30 books and lots of boring academic articles. He was the editor of journals such as the *British Educational Research Journal* and *Educational Review*.

He has two grown-up daughters, one smaller daughter, and two grandchildren. He likes, in alphabetical order, chess, cycling, dogs, his family, gardening, reading and writing. He dislikes big black cars, pomposity and people who try to make things sound more complicated than they are (in that order).

Despite supporting Aston Villa football club, he maintains an optimistic outlook on life.

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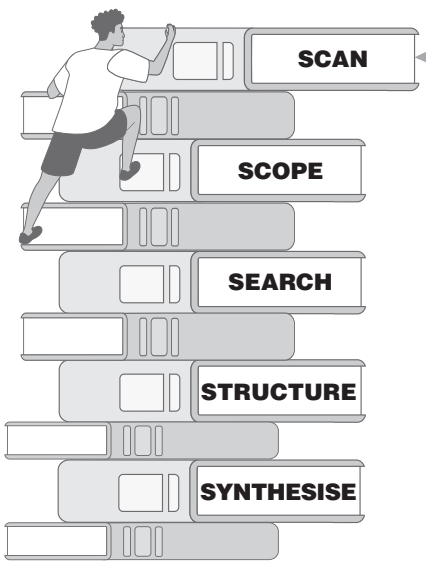
STARTING



In this chapter, I look at the purposes of literature reviews, how to start one, how to set a question, how to think about the structure of a review, and practical issues such as timing.

HOW DO I DO A LITERATURE REVIEW?

As you go through this book, you'll see that there are a number of steps involved in doing a literature review. I've summarised these as *scanning*, *scoping*, *searching*, *structuring* and *synthesising*. They're about gradually focusing down on the subject that you are interested in and weaving together your findings from the literature with your own commentary and analysis.

Scan – you have to think of a topic, scan the area and think of a research question.

Scope – you have to brainstorm and create a mindmap to get the lay of the land. Scoping lets you revise your question, if necessary, and decide ultimately where to focus your search.

Search – here you go out and look for the literature using search engines, library databases and AI tools; you need to organise the material you find and select the most relevant, best quality material for inclusion in your review.

Structure – here you need to consider the best form, the structure, of your literature review – the best way to bring the findings of your search together.

Synthesise – here you analyse your findings and weave them together to write a narrative that has integrity and cohesion.

I've spelt this out in a bit more detail in Figure 1.1, showing where the various steps are covered in the chapters of this book.

WHAT IS A LITERATURE REVIEW FOR?

When you do a literature review you bring together – you integrate – existing sources of information on a topic. But you don't just bring together the information haphazardly. Nor do you just produce a list. Rather, you synthesise the information that you have gathered together.

What does 'synthesise' mean here? It means that you try to digest and interpret the material you have gathered and offer your understanding of it. What does it seem to be saying? What are the themes? What are the gaps? Where are there disagreements? What sort of research is being done? What further research needs to be done? And on the basis of the answers to questions like these, you can offer assessments of the nature and quality of the literature you have reviewed. You can draw

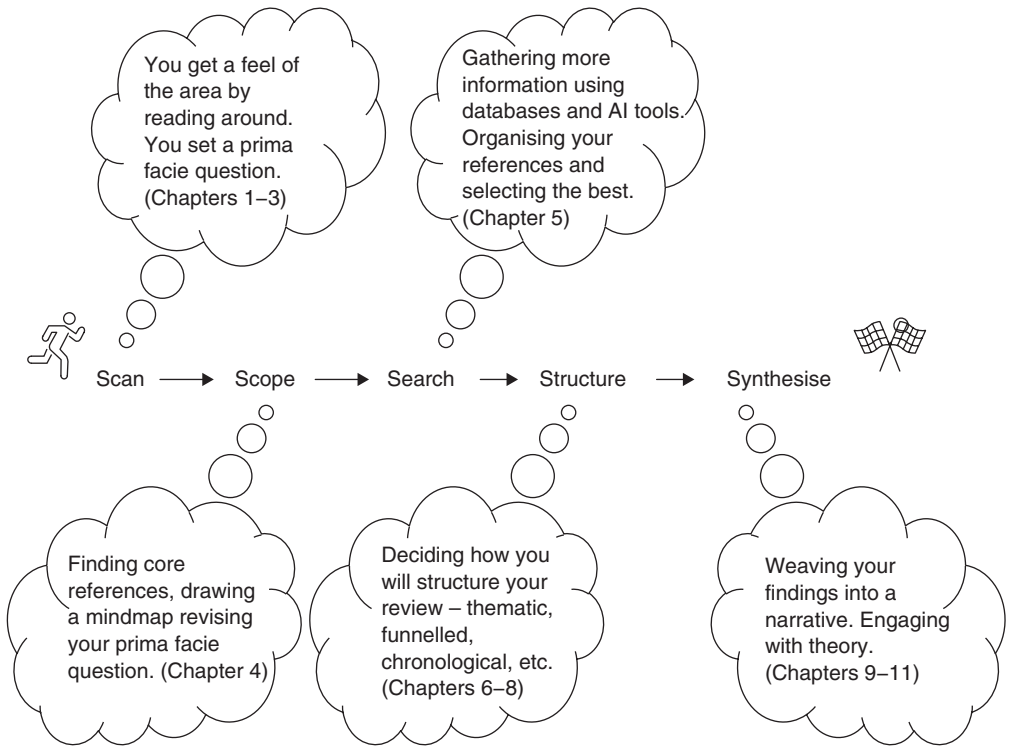


Figure 1.1 From scanning, through scoping, searching and structuring, to synthesising

conclusions about the knowledge that the literature is offering and the validity of that knowledge. Figure 1.2 summarises these aims.

PURPOSES OF A LITERATURE REVIEW AS PART OF A DEGREE

You may need to do a literature review as part of a broader research project. With the insights and understandings that you gain from the literature review you are able to throw light on the questions you have posed yourself in your research project and, if necessary, reshape them. The literature review as part of a broader research project gives you:

- A map of what is already known on a subject – you can place yourself on this map, look around and see how your own proposed research fits in to what is already known
- A sounding board against which you can test out your emerging ideas
- A backdrop against which you can view any findings you collect from your fieldwork

- A scaffold for helping to organise your ideas and build your discussion and conclusions – later in your project, when you come to discuss your findings from your fieldwork, you can construct that discussion in the context of what you have found in your literature review

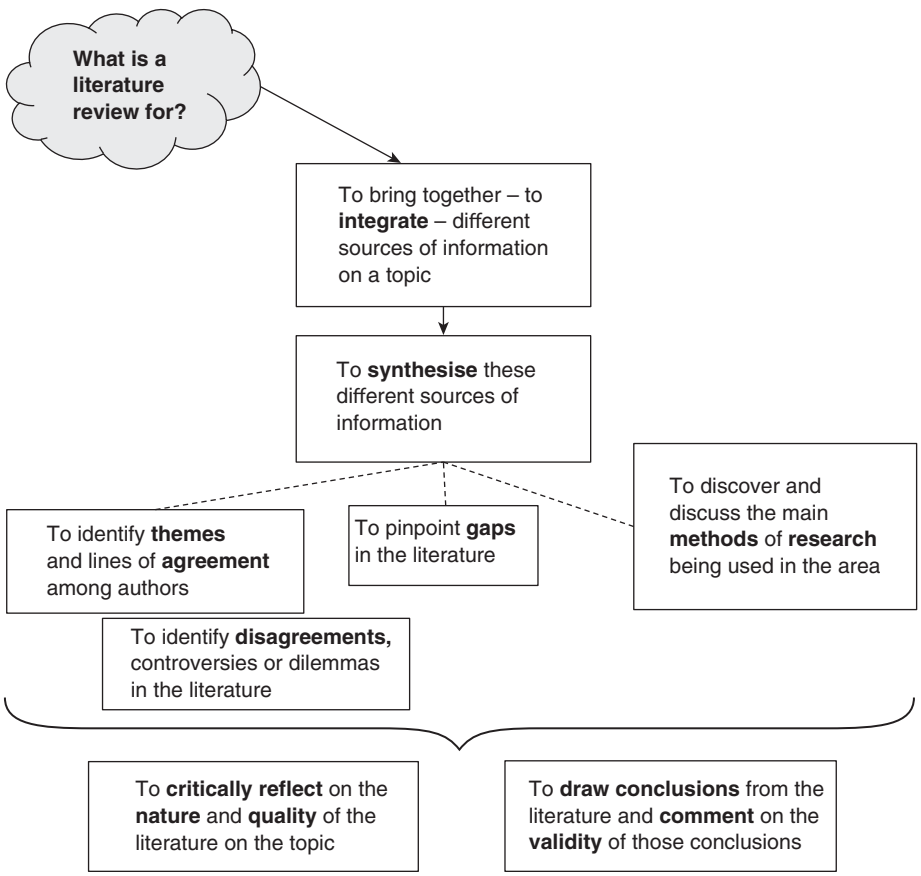


Figure 1.2 What's a literature review for?

Or, you may need to do a literature review as a project in itself – a freestanding literature review. Here, the purpose is comprehensively to marshal the existing published research on a question, topic or issue, and examine it, appraise it and analyse it. In some subjects, where ethical concerns make empirical work impracticable, tutors will stipulate that project work will necessarily be of this kind.

Either way – whether it's a literature review that is integral to a research project or whether it's a freestanding literature review – this book aims to help you to:

- Find relevant sources – mainly books and articles – for your literature review
- Assess those sources for quality

- Organise the references that you find
- Analyse them and synthesise the information you find
- Write about them in such a way that they contribute meaningfully to your work

MEMO 1.1

A literature review may be part of a broader project, helping to inform and guide it, or it may be freestanding, as a piece of work on its own.

WHAT DO RESEARCHERS MEAN BY 'LITERATURE'?

Literature, as far as the research process goes, can be almost anything that represents the results of research or scholarship or informed opinion on a subject. It is written material (or material that is recorded in some other way) that may appear in:

- Books (authored books, chapters in edited books)
- Journal articles (peer review journals, professional journals)
- Grey literature
    - Conference and symposium proceedings
    - Dissertations and theses
    - Newspaper and periodical articles
    - Websites
- Blogs and vlogs
- Social media
- Research reports
- University repositories of published and unpublished material by their staff
- Patent databases
- Court records

Sources is the shorthand for all of these. They are the sources, the birthplaces and the homelands of your information.

Literature is the whole lot: everything; the whole kit and caboodle. *Sources* are the different kinds and flavours of literature. So the Big Daddy is literature; sources are Big Daddy's many little children.

What is a Reference?

Academics talk about sources, citations and references. Sometimes, the terms are used interchangeably and this can be confusing. But don't worry too much about the specific word being used.

When a source is being referred to, or cited, it is usually called a 'reference' or a 'citation'. How we present those references is important: because no one wants a chaotic free-for-all with everyone using their own system for making references, there are specialised ways of writing a reference which bring uniformity to the process, and we'll look at these in detail later in the book.

TYPES (AND NAMES) OF LITERATURE REVIEW

Notwithstanding differences in the purposes of the literature review (part of a project or freestanding), there are, broadly speaking, two kinds of literature review:

- The narrative review
- The systematic review

The *narrative review* is the most commonly undertaken kind of literature review. The narrative review is a wide-ranging critical analysis of the knowledge on a topic. Often, the word 'synthesis' is used about a literature review, emphasising the integrative, 'bringing together' aspect of the review. If the review is part of a wider project, it helps you to establish what is already known about that topic so that you can use this as a backdrop to inform and contextualise your own research. Or, if you are doing a freestanding review (see above), the narrative type of review maps out, summarises and analyses questions, issues and findings about a particular topic.

A *systematic review* is, as the name suggests, systematic. 'Systematic' is its unique selling point. It uses precisely defined methods to identify how studies for the review are identified, and how each study is appraised for quality and relevance. A systematic review may be done either as part of a wider research project to throw light on a question that demands further research, or it may be done as a project in its own right.

I'll look more closely at the distinctions between narrative and systematic reviews and the circumstances in which they are likely to be used in Chapters 6 to 8.

There are other classifications of the literature review form that suggest that further subdivisions can be drawn between kinds of review (e.g. see Kraus et al., 2022; Templier & Paré, 2018). Oosterwyk et al. (2019), having looked at the different uses of literature reviews, suggest that to the narrative and systematic types, one can add theory-building and theory-testing literature reviews, synthesis reviews, cumulative reviews, new perspective reviews and research agenda reviews. Torraco (2005) outlines what he calls 'integrative literature reviews', and Snyder (2019) talks of the 'semi-systematic' review. Booth et al. (2022) claim to have identified over 120 different labels for different types of literature review.

These lists and expanded classifications, though, seem to me to offer mere variations on the themes of narrative and systematic reviews, where the distinctions between the different types are more concerned with focus and purpose than form or nature.

Certainly, reviews take on different shapes and flavours as they tackle different subjects and purposes (and examining these different shapes and variations is one of the main purposes of this book) but there is little point in complicating the broad distinction between narrative and systematic reviews. This is especially so as reviews are rarely unidimensional: they usually take on several purposes – for example, synthesis, offering new perspectives, *and* developing the research agenda, as Kunisch et al. (2023) have noted.

Without wanting to add to any confusion (and hoping that I don't), I'll just finish with one note to the discussion about names. Although I'm going to stick with it because it's widely used, *narrative* doesn't quite hit the spot for describing what a good literature review does. The good review should certainly have characteristics of a story, a narrative – it should have a beginning, a middle and an end – but this is not its principal characteristic. The principal characteristic of a good review, as some commentators have noted, is that it is *integrative* – it brings things together and offers an analysis and synthesis of that integration. For this reason, I think a better term for describing most reviews is narrative–integrative. But, with this disclaimer, and wanting to keep things simple, I'll stick in this book with the well-known *narrative*.

MEMO 1.2

What's in a name? Various classifications of literature reviews have suggested the following:

- Narrative reviews
- Systematic reviews
- Theory-building reviews
- Theory-testing reviews
- Synthesis reviews
- Cumulative reviews
- New perspective reviews
- Research agenda reviews
- Integrative reviews
- Semi-systematic reviews

… and you'll almost certainly find others. However, I don't feel that these classifications really do much to advance understanding of the purpose of review, and I'll stick in the main to a broad distinction between narrative and systematic reviews.

Which Should I be Doing – a Narrative or a Systematic Review?

Narrative and systematic reviews are different, but neither is superior to the other. They have different purposes and different strengths.

Unless you have specifically been asked to complete a systematic review, you will normally be thinking of doing a narrative review, where the onus is on you to find relevant literature, assess it, and weave it into a meaningful account. By contrast, the systematic review involves a specialised procedure that demands a particular and well-defined process to be navigated and you'll need to study this process before embarking on the systematic review. I discuss this further in Chapter 7.

GETTING STARTED

Before you start, it's a good idea to have an impression in your mind of the likely final shape of a literature review.

In Box 1.1, I've drawn a very general sketch of an imaginary review outline (and this is an all-purpose offer for illustration; it's not a model). I'll look more at this structure and its many potential variations as the book progresses, but for the purpose of getting a mental map of where you are and what you are likely to be doing, let's look at this one for now. Whether it's a freestanding review or a review informing a broader project, Box 1.1 shows how there might be chapters or sections for each of the bulleted points.

BOX 1.1

An All-Purpose Sketch of a Chapter/Section Outline for a Literature Review

- Introduction, including:
    - The significance of the topic. Why is it important? What is missing from researchers', professionals' and policymakers' understanding of the topic?
    - Ambit – what you will cover. If the topic is, say, child neglect, you might be looking at this in the context of a particular professional understanding (whether that be social work, nursing, teaching or another profession)
    - The historical background, explaining the background and context of the topic as it is revealed in the literature
    - The literature types being used – e.g. books, articles, reports, and why – explaining where most of the literature occurs and whether, for instance, unusual sources such as local journalism are particularly important for this topic
- Your methodology. How did you scope the area? How did your scoping, your preliminary thinking, proceed? What did you decide to change, and why? What decisions did you make about the structure of your review, and why?
- Main points and issues being addressed in the literature, noting researchers' findings and conclusions and identifying – between and among the sources – connections, similarities, relationships, trends, patterns, differences, arguments, divergent viewpoints or controversies. Each issue will form its own unique chapter:
    - Issue 1
    - Issue 2
    - Issue 3, etc.
- Methods used by researchers in the field. What sort of research and commentary has occurred? Has the research mainly been by qualitative methods (case

studies, participant observations, etc.), survey, or formal experiment, or what? Comment on the appropriateness of the methodology and whether different methods might have produced different analyses
- Overall discussion/synthesis, drawing out general issues
- Conclusion, noting, among other things:
  - The overall pattern of agreement and difference in the literature
  - Strengths and weaknesses of the body of research
  - Areas for further research
  - Your overall assessment and evaluation of the literature – its quality, status and message

In terms of proportions of the total number of words for each section or chapter, this might work out as in Figure 1.3. Again, I stress that this is a guideline, not a recommendation since different reviews will have different structures. Figure 1.3 is just to give you an idea of the balance of a fairly typical review.

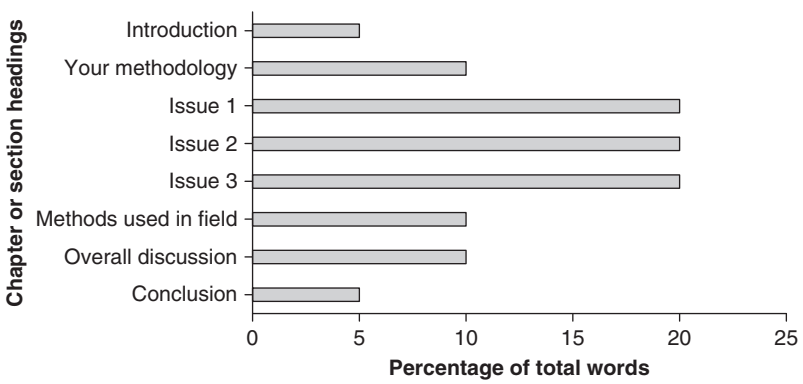


Figure 1.3 Percentage of total words (roughly) in different chapters/sections of the review

In the rest of the book, we'll look closely at the content of these different chapters and sections (and how things may vary), but for now let's just have a look at the first of the items in Box 1.1, the introduction.

THE INTRODUCTION

You start with an **introduction** – with an explanation of your interest in the project you have in mind.

Depending on whether you are doing a freestanding literature review or one that will be informing a broader research project, the introduction takes different forms:

- For the freestanding review, the introduction has to do a lot of heavy lifting, since it sets the scene for the whole review and will comprise a short chapter on its own
- For the literature review that is part of a research project, an introductory chapter has already launched the project; here, the introduction to the literature review chapter will be a section at the beginning of the chapter.

Either way, the introduction has to do a number of things:

- It has to introduce the reader to your thinking about the topic and its associated literature. Explain what interested you, and what made you think that your topic was worth researching. If the topic was set for you by your tutor, why is it an interesting topic on which to do a literature review?
- It has to translate your thinking, your interests and your purposes into initial research questions for your literature review
- It has to tell the reader briefly about any changes in direction that have happened as the review has progressed
- And it has to outline the potential ways in which you could go about doing the review

Remember, your introduction is not a summary of the whole project. Students sometimes make the mistake of reducing their introduction to a list: 'Chapter 1 is about … Chapter 2 is about … Chapter 3 is about …' etc. Instead, the introduction should be the beginning of a story: it should capture the reader's interest. Most of all, it should say *why* you are doing the literature review. It should explain why anyone should care.

What is the *Point* of this Review? Why Should Anyone Care?

In the introduction you have to communicate to readers (i.e. in the first instance, your markers) why you think this is a good topic to research. What is the issue you are trying to illuminate? There has to be an issue there, or perhaps a problem that needs to be solved. Something needs to be found out and your review or wider research will throw light on this.

In other words, why are you doing this project? Your research should not simply launch off into some exploration without a reason for that exploration. There has to be, as Booth et al. (2016: 228) put it, 'some condition of incomplete knowledge or understanding' on which you are promising in your review to throw light. You must let the reader know what this condition of incomplete knowledge or understanding is. Not making this clear is one of the commonest weaknesses in both undergraduate and postgraduate research. If you don't make it clear, the reader is quite justified in asking 'So what?'

> ***MEMO 1.3***
>
> The introduction sets the scene for the review by giving a general background to your topic and the dimensions to the issue you'll be looking at.

To answer the 'So what?' question, you need to make two things clear in your introduction. First, you need to outline the *background* to the topic that you are interested in – the context within which your issue is seated. Second, you need to explain the interesting or significant *issue* that emerges from this context – which might, for example, be the need for a digest of the literature or it might be some missing evidence or contradictory reasoning or some paradox or dilemma in the existing literature.

Let's take an example. Suppose you decided (or were told) to do a literature review – or a research project which required a literature review – on the topic of childhood obesity. This is a broad topic and could take any of a number of forms. As I've indicated in Table 1.1, you would first lay out the background with necessary definitions, establish

Table 1.1 The general structure of an introduction on the topic of childhood obesity

General content	Subheadings
Background	Definitions
	Increasing childhood obesity, with data to support the assertion that it is increasing
	Obesity raises concerns for both physical health and psychological wellbeing
Dimensions of the issue	Understanding and perception of 'food' today – from nutrition to lifestyle marker and source of pleasure
	Calorie intake – nature of
	Fat intake – nature of – differences in different countries and comparisons
	Physical activity – sedentary lifestyle: screen time; driving to school
	Built environment – effects – walking and cycling networks; parks, loss of
	Prevention
Question or thesis statement	May take a number of forms (see p. 17)
	Possible starting points: • What are the main lifestyle and dietary factors surrounding childhood obesity? • Can legislative approaches to the obesity epidemic be effective? • Strategies for early identification of excessive weight gain

the status of the issue with supporting data and outline the reasons for concern. You might then outline the various dimensions of the issue – looking at different facets of the subject such as the understanding and perception of food today, calorie intake and obesity prevention. You could briefly outline these aspects of the issue prior to a decision about the question that you will ultimately be asking or the thesis statement that you will be addressing in your review. We'll look in more detail at questions and thesis statements later in this chapter.

I've said that all of this occurs at the beginning of your work, and I do think that this is important. However, the celebrated sociologist Howard Becker (2008) suggests that you can't write an introductory chapter or section at the start of your work, since you haven't done the work yet and you don't know what you're introducing. He says, 'Get it written and then you can introduce it' (p. 50).

It's a valid argument. And far be it from me to gainsay the advice of one of the most lucid writers in the social science pantheon. I think Becker is certainly right in general terms, but he is speaking with the benefit of decades of experience and a sophisticated mental map of the territory of his field. If you have less experience though, there is a need first of all to draw that mental map. If you don't already have the map in your head, you need in the first instance to create it, seeing what fits where, and this means considering elements of the introduction at the beginning. Apart from introducing others to your work, this will also help to make it clear to *you* what you are going to do and why you are going to do it. If you write this down in draft form at the beginning, it can certainly be sculpted at the end, but it will serve as a useful guide as you start off and as you proceed.

DIY ACTIVITY 1.1

From Idea to Research Question (30 minutes)

Look at Table 1.1 about childhood obesity. It sketches out background features to the issue and some dimensions to pursue in an introductory chapter. Each of these could be followed up or a smaller number focused on, depending on the question ultimately derived from the different facets of the general issue.

Now think of a topic in your own area of interest. It may be one of concern for the field, or one that you feel needs some explication. Or it may be the topic that you have already decided that you want to do a review on. Whichever, and using the format I used for childhood obesity in Table 1.1:

- Sketch out a background to the issue
- Outline various dimensions to the issue
- Offer a research topic (in the form of a question or statement) on the basis of these

WHEN SHOULD I BE DOING MY LITERATURE REVIEW?

You start doing your literature review before you even put pen to paper about your dissertation or project. Something will have interested you about a subject. You'll have read something online, or you'll have had your interest sparked by a comment in a lecture, or you'll have personal experience of a particular topic. Whatever, you'll already have started thinking about that topic and you may have followed up that thinking by discussing it with friends or family or your tutors. You may have searched on the internet to find out more about the topic.

Doing any of this means that your literature review has begun. Already, you are gaining knowledge, beginning to understand where gaps in knowledge may lie, assessing whether there are doubts, controversies or arguments within the field.

And, whether or not you are doing a freestanding literature review, your literature review will carry on until the end of your research. If your review is part of a broader project, you will devote a particular block of time to it, but this doesn't mean that the literature review begins and ends with this block of time. You'll carry on searching and reading right up until the end of the project, always looking to add to the review and integrate new-found or more up-to-date material.

Figures 1.4 and 1.5 show the typical timing of elements of the literature review process. Whether a freestanding review or a review which is informing a wider project, the review extends from the beginning to the end of the available time. You never stop looking at the literature, and you should always be willing to add new material to your review as you encounter it.

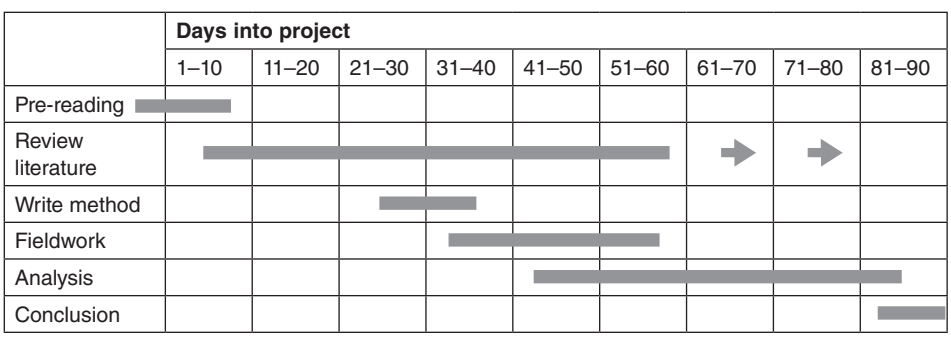


Figure 1.4 Where the literature review occurs, timewise, in an empirical project

For a freestanding literature review, the pattern is rather different, with no element of fieldwork and the emphasis clearly on the search and analysis of the literature, as shown in Figure 1.5.

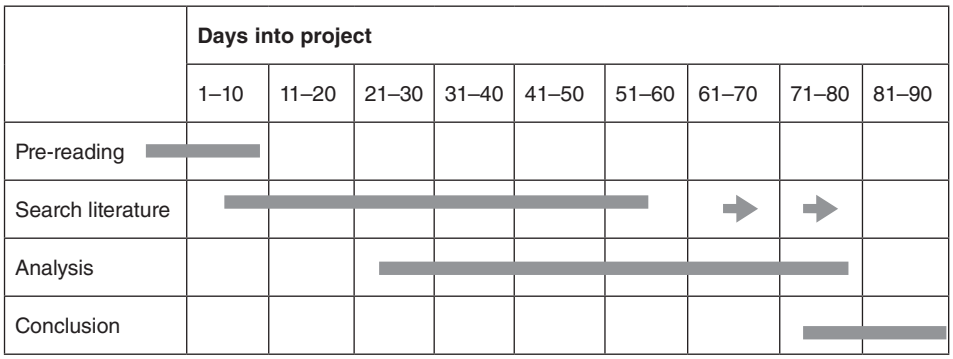


Figure 1.5 The timing of a freestanding review

HOW LONG SHOULD MY LITERATURE REVIEW BE? AND HOW SHOULD IT BE STRUCTURED?

As before, there are differences depending on whether you are doing the literature review as part of a research project or as a freestanding review on its own …

For a Research Project Review

The literature review which informs empirical research in an undergraduate research project, a master's dissertation or a PhD thesis is usually one chapter, though it may extend to two or three if there are clearly distinct parts of the topic in question to be examined. Usually, it will comprise 20–30 per cent of the word count of the whole project write-up, so in a 10,000-word undergraduate project write-up, it may be 2,000–3,000 words long. For a longer piece of work, such as a doctoral thesis write-up, the proportion will be rather lower – perhaps 10–20 per cent of the whole. There are no hard and fast rules about length, though. The thing to remember is that the literature review is a substantial component of the whole work; it is, emphatically, not an add-on.

And 'How many references will be enough?' (I put the question in quotes only because it's probably the one I get asked most by students.) Sadly, there's no clear answer. However, I know you want an answer, so here goes: 'Enough' will depend on the subject and level but, as a very rough guide, I would expect to see at least 15–20 works referenced for an undergraduate project, and at least 30 or 40 for a master's dissertation, and proportionately more for a doctoral thesis. To reiterate though, there are no rules about numbers: the number of references you are able to use will be influenced by the nature of the field and your research questions.

In a research project, the literature review is part of a whole, coming near the beginning of any write-up in the expectation that it will inform the rest of the project, so the typical project trajectory will be as shown in Figure 1.6.

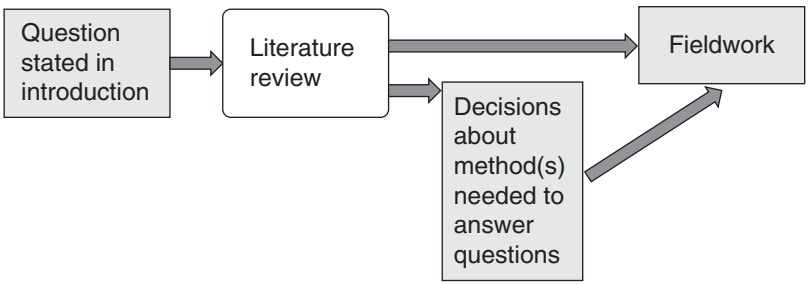


Figure 1.6 A typical project trajectory

In other words, the literature review informs both your decisions about methods needed to answer your research questions, and the fieldwork you ultimately conduct.

QUOTE

'Think before you speak. Read before you think.' (Fran Lebowitz, 2021)

For a Freestanding Review

For the freestanding literature review, the literature review is the entire thing – the whole caboodle, and the module guidelines in your university department will tell you the number of words expected. There will be an introduction and conclusion, as there is in an empirical project, but these will be integral to the review itself. The whole write-up is the review, differentiated in chapters according to elements of the review focus and the analysis, and the literature review is as long as the specified number of words for the project.

The issue of how many references arises here in the freestanding review too, as it does in the empirical project. I have heard from a student in nursing that she was advised by her tutor to have one reference per hundred words. I personally think this is rather excessive for a 10,000-word literature review dissertation, making a total of a hundred references needed for the whole work. The advice was perhaps an extrapolation from the finding that there is this proportion (i.e. 1:100) in academic review publications in clinical science, but such articles are much shorter and thus end up with only around 30–40 references. Indeed, some top journals, such as *Nature,* recommend a *maximum* of 50 references per article. If I were forced under threat of torture to offer a guideline for the number of references for a 10,000-word literature review, I'd probably say between 30 and 60. But this is a very elastic range.

The long and the short of it is that there are no universal rules about numbers of references, and you should be guided by the advice of your tutors. If you're worried that you have too few (or too many), check with your supervisor.

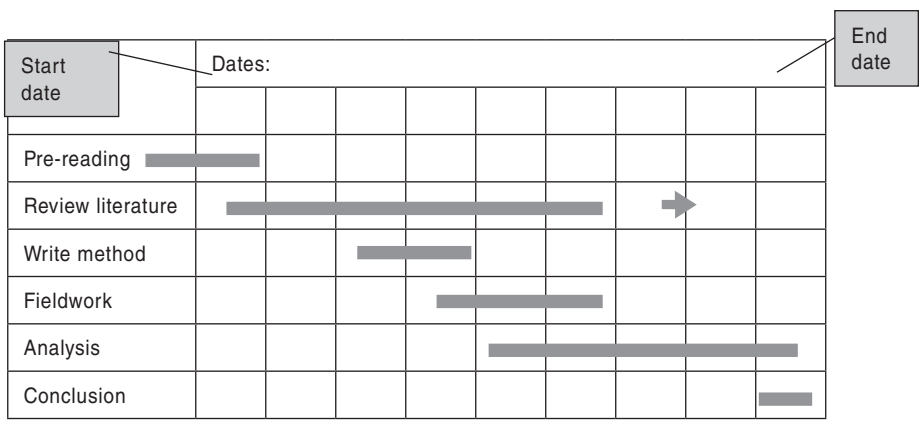
DIY ACTIVITY 1.2

A Timeline for Completing your Review (20 minutes)

This activity is just to give you an idea of how your work may be planned timewise. There are no right or wrong answers. Think about how you might logically divide the time you have available. (Alternatives are given, depending on whether you are doing a literature review as part of a broader research project or as a freestanding literature review.)

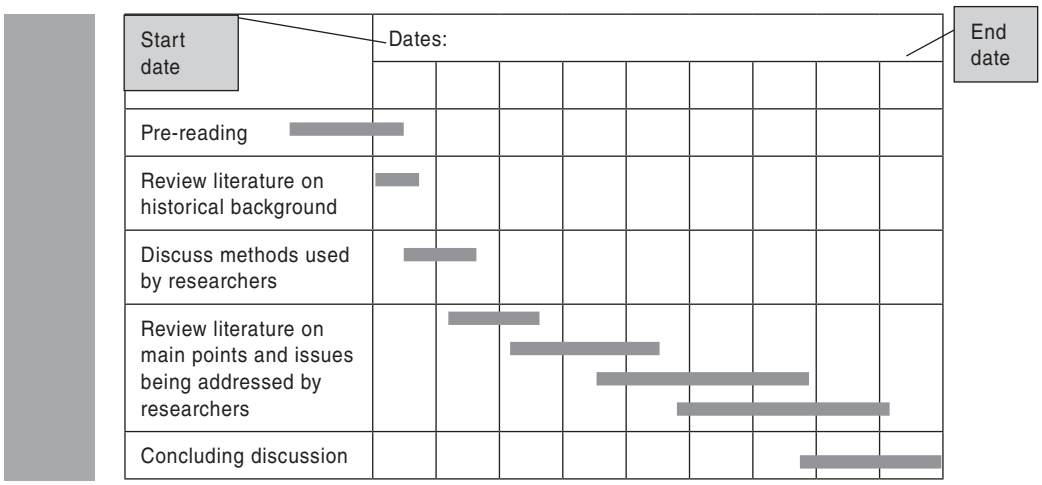
For a Literature Review as Part of a Broader Research Project

If you know the start and submission dates for your project fill them in on the timeline below and estimate dates for the columns in between. (Tip: it's probably a good idea to space the timings fairly evenly.)



For a Freestanding Literature Review

If you know the start and submission dates for your literature review fill them in on the timeline below and estimate dates for the columns in between. The first column gives an idea of the broad sub-divisions into which the whole work may be split by chapter; they are just suggestions – replace them if you already have an idea about how your work will be structured. (Tip: it's probably a good idea to space the timings fairly evenly.)



QUESTIONS, QUESTIONS … AND THESIS STATEMENTS

Already, you'll have noted that I've talked about questions, issues and topics. To that list, I could add inquiries and uncertainties. The aim of research is to lessen uncertainty, to answer questions, to throw light on topics about which not enough is known. Research is about all of these. It's about finding out – finding out about things we don't know or that we're unsure about. With these aims for research, the literature review stands both as a key method of research in itself, and as a crucial component in wider research.

Given that research is fundamentally about questions and issues, it's usual to begin research with a clearly formulated question or a clearly stated issue for further exploration.

This starting point for research may be called the *research question* or, where the word 'question' does not seem the best way of expressing the issue at the heart of the project, the term *thesis statement* is often used. The thesis statement is a sentence that sums up the central theme and purpose of your study.

QUOTE

'… the answers you get from literature depend on the questions you pose.'
(Margaret Atwood, 1972)

Whichever – research question or thesis statement – this central articulation of your research interest is key for the way that your research develops and proceeds. Since this starting point is so central, let's have a quick look at the nature of the kinds of questions with which we may begin research. I've noted elsewhere (Thomas, 2023) that there are broadly four kinds of research question:

- What's the situation?
- What's going on here?
- What happens when ...?
- What is related to what?

Different Questions, Different Studies

Each of the different kinds of question I've just outlined will lead to a different kind of study, with a different character and employing a different methodology. Some questions, like 'What happens when ...?', demand an answer that requires an empirical response. By 'empirical' I mean a response that needs you to go out and discover something from your own experience – to do something, fieldwork, that gives you information that offers an answer to the question. You can't answer the question 'What happens when I use reading scheme X with my class?' without an empirical modus operandi, without fieldwork, so you can't answer it with a literature review on its own. However, with this question, a literature review will certainly contribute to – indeed, be necessary for – any empirical project that you set up to answer that question, since other people will almost certainly have tried something similar, and you can benefit from their experience. Alternatively, a free-standing literature review may review sources reporting empirical work that has addressed questions on the topic.

By contrast, a question that calls for a descriptive answer, or that asks about the dimensions of an issue, or the controversies in an academic or professional area, or the findings about the connection between different variables (for example), can quite legitimately be addressed by a literature review on its own. Have a look at DIY activity 1.3 and think about the kinds of work that would need to be done to answer the questions there.

DIY ACTIVITY 1.3

Developing Research Questions (45 minutes)

Look at the topics in the first column below. Now, choose one of the topics (not the top one, which is an example), and in the middle column offer two research questions that might be asked about it. Then in the third column, say whether you think an empirical response with fieldwork (alongside a literature review) would be needed to answer each of those questions or whether each of the questions could be answered by a literature review alone. Say why you have answered as you have.

Topic	Questions	Will a literature review on its own suffice? (Or will some element of empirical work also be necessary?) Comment on your reasons.
Example: The role of laughter in social situations	a) Is laughter used to diminish the position of vulnerable members of a group?	Yes, a literature review on its own will suffice. Much has been written on the social role of laughter and this can be marshalled and analysed with reference to vulnerable group members.
	b) How is laughter used to diminish the position of newly appointed members of my work team?	No, a literature review on its own will not suffice. The team leader will need to find out what happens in her team from observation, interviews, etc., perhaps using a case study.
1. The influence of the media on the development of young people's body image	a)	
	b)	
2. Female childhood in matriarchal and patriarchal societies	a)	
	b)	
3. The role of academisation in the development of the education system	a)	
	b)	
4. The influence of the spatial environment on human behaviour	a)	
	b)	
5. The role of handwashing in the control of the spread of Covid-19	a)	
	b)	

And the four kinds of question I bulleted above, whether we're thinking about a free-standing review or a review that is part of an empirical project, will lead to different kinds of literature review. One that asks, 'What happens when …?' in a literature review demands a search looking for work that has been of an evaluative character. By contrast, one that asks 'What's the situation …?' will be looking for work that describes features of a situation. We'll look in more detail at these different shapes of literature review throughout the book.

Questions that Develop

You start with the research question or thesis statement I've just been discussing. This formulation – question or statement – is at the core of your work. But right at the beginning of your work this question or statement is usually a tentative proposition – the basis of a for-the-time-being plan. Unless you have been *instructed* to work on a particular, defined statement or question, you must always recognise that your first research question may change. For that reason, it's a good idea to think of the question you start off with as a *prima facie question* – one that will very possibly change as you think more about the subject and come into contact with more ideas from your initial reading.

QUOTE

'Judge people by their questions rather than their answers.' (Pierre-Marc-Gaston de Lévis, 1812)

A Prima Facie Question

When you begin your research, you're unlikely to have a sophisticated knowledge of the literature in an area, of its gaps or strengths, so when you set your first research question you are unlikely to be in a position to put your finger on the key topics, controversies, differences, breaks in knowledge or burning issues in an area. Because you are probably something of a knowledge-newcomer to the area, it's a good idea to see your first research question or statement as a *prima facie* question or statement. 'Prima facie' means 'at the first look', and this is exactly where you are when you begin your research and set your first question – you are at the first look.

MEMO 1.4

Prima facie question: This is a start-up question. It may change as you discover more from your initial reading.

In a literature review – which is a specialised form of research – understanding the flexibility of the research question is central. As you are doing your review, you will be coming across new material all the time, and as you do this your ideas will, very likely, evolve: you may ask what seems less important now that you have read a few articles.

What seems as if it may be more interesting? Your very first reading will inform you on a great deal and enable you to adapt your ideas and your research question, as shown in Figure 1.7.

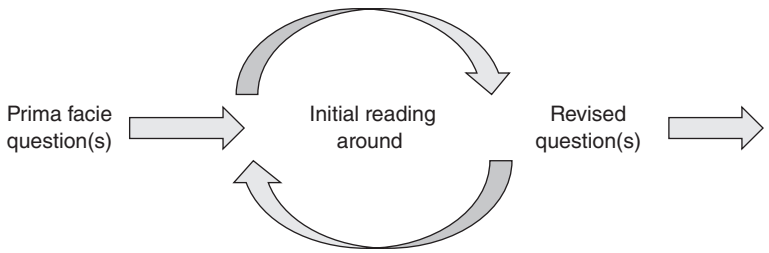


Figure 1.7 How the prima facie question may change

Thinking of the research question in this way – evolving as you accumulate knowledge and ideas – highlights an important point about the way that a literature review, and indeed most inquiry, develops. Especially in applied science, where a practical element is common, inquiry is rarely static: it evolves as it proceeds. Inquiry is not usually a linear process: reflection, rethinking and revision are essential ingredients. It's not as if the research question is a bullet fired from a gun, bang! and off it goes in a straight line until it reaches its target. Rather, inquiry – especially in applied subjects – has to be adaptable, bendy and tractable. It has to yield to new information as that new information is found.

We will look at this process of adaptation in more detail as the book proceeds. It's an essential part of a literature review because the literature review, almost by definition, is an evolutionary process, with a finding over here building on something that you unearth over there, a thought about x leading to an inspiration about y. Ideas meet, connections happen, synapses fire and, hey presto!, you've moved your thinking – and understanding about the topic – forward.

In the literature review, the beginning of this process of revision and evolution, near the start of the work, is given the name 'scoping'. It's about when you begin your work, thoughts are swirling, initial reading is happening and you're getting a broader mental map of the topic you are studying. On the basis of this map you can, if you wish or if you feel you need to, revise your first-look question and think more seriously and more concretely about the shape that your literature review is likely to take. We'll look at how you can do this in Chapter 4.

CAN I HAVE MORE THAN ONE RESEARCH QUESTION?

Yes, it may often be appropriate to have more than one question, though if there are more than one, these will be related in some way, with perhaps two or three linked main questions.

For example, you might be interested in the social factors that gave rise to the growth and influence of the #MeToo movement (which is a movement wherein people make public their experiences of sexual abuse or harassment), with a targeted focus on an aspect of this topic such as the influence of the movement on institutional policy and behaviour. Here, you might have two related questions, such as:

1 What have been the effects of the #MeToo movement on workplace policies and practices regarding sexual harassment?
2 Has the #MeToo movement affected the gender dynamics and power structures within commercial organisations and public institutions?

These are clearly separate but related questions that together could form the basis of a coherent literature review. However, there may be a central question that leads naturally into subsidiary questions. For example, if you were interested in the influence of the #MeToo movement in matters of law you may have a main question that leads to one or more sub-questions:

1 To what extent has the #MeToo movement contributed to changes in legislative responses to sexual harassment and assault?
    i How has the #MeToo movement impacted the legal definition and interpretation of consent in sexual assault cases?
    ii How has the #MeToo movement influenced the reporting and prosecution of sexual harassment and assault cases?

Each of these questions and sub-questions could form the basis of different elements of a review. Indeed, the partitioning of the topic into questions and/or sub-questions may help in structuring the review, making for natural breaks in the treatment of different aspects of the general topic. Such partitioning of the general topic may also help in the identification of keywords for the database search that is ultimately made. In DIY activity 1.4 you can think about your own area of interest, and questions, subsidiary questions and keywords that may spring from it.

MEMO 1.5

Setting keywords is important for searching in a database. It involves clearly defining the information you are looking for and creating a list of words and terms that encapsulate the essence of your question. We'll look at them more in Chapter 5.

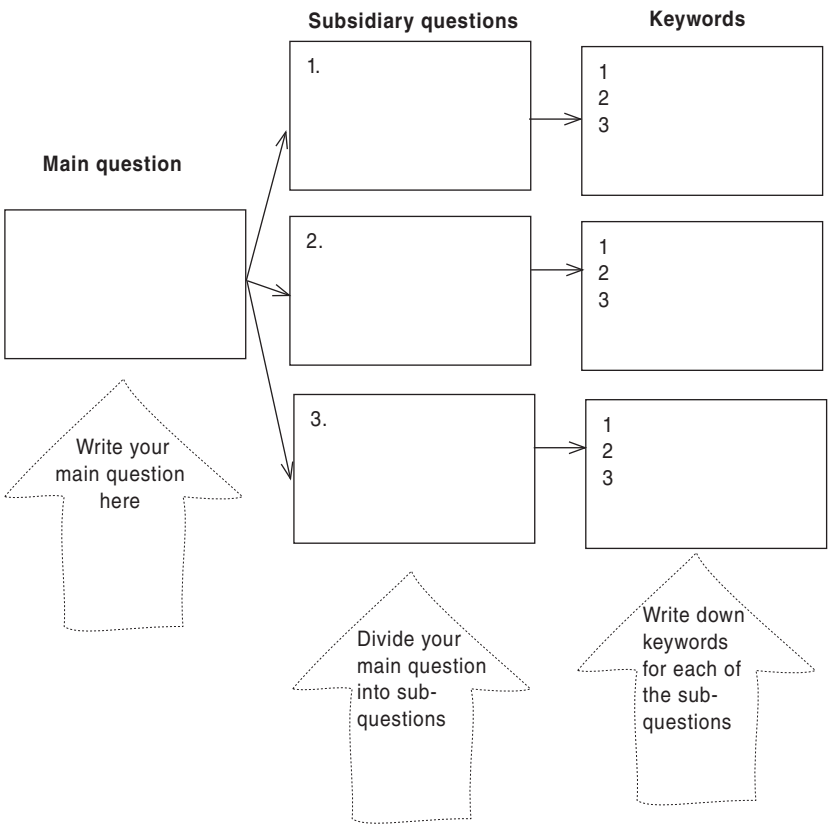
DIY ACTIVITY 1.4

More than One Question and Thinking about Keywords (20 minutes)

Think of a topic in your own area of interest and a main question that could come from it. Write it in the box labelled 'Main question'. Now think of subsidiary

questions that may spring from it, and keywords that may derive from these questions.

If you are not yet at the stage of identifying a topic in your own area of interest, use this question related to the topic discussed in the text: 'How has the #MeToo movement impacted public perceptions of sexual harassment and assault?'



USING AI-BASED APPLICATIONS TO HELP YOU FIND RESEARCH QUESTIONS

There are now various artificial intelligence (AI) applications that will help you think about research questions. Tutors can be a bit suspicious of these as they seem to do all the work for the student. My own view about them is that they can offer useful tools for making a preliminary scan of the available knowledge in an area and making suggestions about how to proceed. We should, though, be cautious about elements of their use.

Undergraduates, especially, are not able to draw on the kind of encyclopaedic mental map of an area that will enable a reliable marshalling and organisation of academic knowledge in that area. So, these AI instruments, in my opinion, can be seen as devices that help in that marshalling process and in the formulation and organisation of work

> ***MEMO 1.6***
>
> Artificial intelligence (AI) applications can help you to brainstorm questions and find sources. However, they are not good at making the kind of connections needed for a good literature review.

for a literature review (see Blaizot et al., 2022; Wagner et al., 2022, for discussion). We use tools and machines in other areas of our life, and where they are available we should not be embarrassed about making intelligent use of them in our research as well.

The key, I think, is not to follow them slavishly but to use them as stimulants for ideas, as aides-memoires, as workhorses that can skim over the vast amounts of literature available to help find relevant sources. In particular, it's a good idea to draw on the incredible data-finding abilities of AI but to be wary of the 'high level' aspects of AI's offer such as its summaries and digests of articles. It's good to be wary a) because using digests indiscriminately could constitute plagiarism, and plagiarism software is sure to discover this, and b) because the digests may be misleading … or just simply wrong. As Facebook-owner Meta's president of global affairs Nick Clegg has said, 'intelligence' is something of a misnomer in AI; in fact, current artificial intelligence (AI) models are 'quite stupid', he suggested (Kleinman & Gerken, 2023).

ChatGPT is probably the best known of these AI tools at the time of writing, but it is not directly literature orientated, and others have been developed which are specifically aimed at scanning the literature for research. One such is Elicit.com, which is an especially interesting 'research assistant' (as it calls itself), specifically orientated to scanning the literature. In the words of its developers it '… uses machine learning to help you with your research: find papers, extract key claims, summarize, brainstorm ideas, and more'. You can find a basic tutorial for Elicit at www.youtube.com/watch?v=SRhEB2PCrG0

HUMANS VERSUS AI

A literature review is not just a compilation of related references and sources. That would just be a jumble. Nor is it a list. The best literature reviews go beyond list-making. They strive, rather, for storytelling. Not storytelling as in making up a tale, but storytelling as in weaving linked ideas into a narrative – a narrative that means something in relation to the questions that you have posed.

It is this narrative-making that will give the human literature reviewer a huge superiority over the AI literature reviewer. The good human reviewer's review will make full use of 'however' and 'whereas' and 'by contrast with' and 'the balance of opinion' and 'time has allowed new evidence to change ideas' and 'Patel and Brown differ fundamentally with Xi' and 'we might conclude tentatively that', whereas even the best AI's offer won't be much more than an expanded list.

To do the good, insightful human review, try to get a bird's eye view of the subject by assembling as broad a range of sources as possible and then looking for lines of convergence or divergence between and among them. How do ideas cluster? Where are ideas similar? Where are they different and why?

To do this you need to:

- Gather as much information as you can from a range of sources
- Sort it for its relevance – is it broadly or pointedly relevant to your question? Categorise it both for relevance and topic, theme, issue or focus (and we'll look at how you can do this in Chapter 5)
- Triangulate – in other words, look at the information you have gathered from different angles and viewpoints – for example historical, cultural, geographical, perhaps asking how things have changed over time or in different places
- Understand how sources fit together – develop a 'cognitive map' of the subject, clustering similar or discordant voices
- Develop lines of reasoning which may contribute to answering your research questions

SUMMARY AND OVERVIEW

- Literature reviews tell you what is known about a topic and help you to contextualise your own work
- Literature reviews either contribute to a broader project in which you do your own fieldwork, or they can be freestanding projects, without additional fieldwork
- There are narrative and systematic reviews. In a narrative review the onus is on you to select appropriate literature and assess it, whereas with the systematic review researchers use a specialised procedure to search for and select appropriate literature
- There are a number of steps involved in doing a literature review: scanning, scoping, searching, structuring and synthesising. They're about gradually focusing down on the subject that you are interested in, searching and synthesising the literature, and ultimately concluding with a write-up that has cohesion and integrity
- The introduction to your review is important for you as well as for the reader. It maps out the area for your work, and it helps you shape your questions
- For a literature review that informs a broader project, it will normally occupy 20–30 per cent of the number of words for the project write-up. For a freestanding review, it's 100 per cent
- The research question or thesis statement will be at the heart of your review. Right at the beginning of your work, you will set a start-up question, a prima facie question, which may be changed as you scope the area

FURTHER READING

Aveyard, H., Payne, S., & Preston, N. (2021) *A Postgraduate's Guide to Doing a Literature Review in Health and Social Care*. London: Open University Press.
Clearly written and especially useful for those in healthcare.

Coughlan, N., & Cronin, P. (2020) *Doing a Literature Review in Nursing, Health and Social Care*. London: Sage.
Good for nursing or healthcare students.

Greenhalgh, T., Thorne, S., & Malterud, K. (2018) Time to challenge the spurious hierarchy of systematic over narrative reviews? *European Journal of Clinical Investigation*, *48*(6), e12931. https://doi.org/10.1111/eci.12931
This paper, from highly respected medics, gives a fascinating discussion of the pluses and minuses of systematic and narrative reviews and does much to debunk the false notion that one kind of review is better than another.

Petticrew, M. (2015) Time to rethink the systematic review catechism? Moving from 'what works' to 'what happens'. *Systematic Reviews, 4*(36). https://doi.org/10.1186/s13643-015-0027-1
Like the Greenhalgh et al. paper, this article questions some of the shibboleths of systematic review.

Williamson, G.R, & Whittaker, A. (2019) *Succeeding in Literature Reviews and Research Project Pans for Nursing Students*, 4th edn. London: Learning Matters.
Does what it says on the tin.