

Introduction

Getting to know a subject and creating new concepts and theories requires a deep understanding of what has already been published. To obtain this knowledge entails engaging with what is loosely termed 'the literature'. Often this task is described as doing a 'literature review', but this is only one form of engagement. Of course academics are naturally interested in their subject and reading published work is necessary to further develop subject knowledge and expertise. However, a literature review is also done for a wide variety of reasons that can be quite specific. In this chapter, we have considered the following purposes:

- 1 To understand the field and help develop a research question or identify a worthwhile gap.
- 2 To provide the context and justification for a study in the introductory section of a journal article or thesis and allow for comparative and critical analysis of data.
- 3 To demonstrate knowledge and insight into a subject for the purposes of a gaining a PhD and writing a thesis.
- 4 To conduct a systematic review of a research topic.

These four purposes share many of the same features and require similar skills. Regardless of what type of review is involved, we know that novice researchers find all forms of engaging with the literature a challenge. In our view, those new to research can easily replicate what is said in published accounts but find it difficult to extract useful concepts. A further challenge comes from the field itself. The subject of higher education is vast and multi-disciplinary and those new to the subject, and

in particular those who are also new to research, have a tendency to read published work (regardless of purpose) without knowing when to stop. We think that this continual reading phenomenon is attributed to several drivers. First, the novice may find it difficult to extract the more useful conceptual ideas from each article and so will go on to the next in the hope that something important will eventually emerge through this process. In this sense, reviewing the literature is a numbers game that may also be driven by the fear of missing out on something important. Second, there are lots of interesting ideas to be discovered and these can all seem relevant to a new researcher. The researcher's enthusiasm for collecting such ideas causes the subject to expand exponentially and with it the reading task. Knowing when something is peripheral or tangential to a study is a skill usually learned through time and experience, but we suggest that lack of analytical skills, being enthusiastic and making poor judgements may all be reinforced by procrastination. It is easier to defer the more critical and conceptual aspects of research and keep busy by continuing to read on.

To engage with the literature in a timely manner and approach it critically is essential to any research apprenticeship. In this chapter, we propose that the required analytical skills can be learned in a systematic way, and that once learned, will influence all aspects of research and being a researcher. Ideally, the review of the literature comes to an end when the researcher no longer sees any new ideas that can contribute to a study. This state could be referred to as a 'point of saturation', which is similar to the same concept used in determining the number of qualitative interviews required in a study (Chapter 5). However, time or resources usually determine the point of saturation and we call this 'executive saturation', meaning that the researcher makes an executive decision to stop reading the literature, while fully aware that this would continue under more ideal conditions.

Academics who are already experienced in a research field should have no problem engaging with literature in higher education. However, we suggest that this chapter may still be of some use here, because the structured system we outline and the tools provided may be used for supervision and training postgraduate student researchers in various fields. Most postgraduates have little research experience and are likely to be weak in this area. Essentially, we are recommending that novices should be trained systematically in the procedures for review, and once these initial skills have been mastered, they can be put to use in the various forms of literature engagement that occur throughout a research project. As expertise is developed, a lot of what we outline here will become more instinctive and perhaps even taken for granted.

The chapter is organized into three sections. In Section 1, we look at the key knowledge outcome of a literature review and provide a model for developing a conceptual framework. Section 2 presents a model for a systematic process for literature review. In Section 3, we provide two simple tools to help novice researchers organize their ideas, and some thoughts about how an expert might approach the literature.

1 Developing a conceptual framework

Not only do researchers need to know and understand their field, identify a meaningful gap and develop a research question, it is important that a conceptual framework is developed. This framework contributes to theory development and is usually determined and refined through engagement with the literature. For example, the concept 'powerful knowledge' is currently a topic of renewed interest in higher education research and there are several authors writing about it, but framing it in different conceptual ways (Wheelahan, 2015; Young, 2013; Young & Muller 2013). We use this example because it has recently challenged us and we know what steps we had to take in order to tease out the various meanings in order to (hopefully) make a contribution to the theory. First we needed to examine the relevant literature and carefully identify the components of this concept, work out how different authors defined these, how they differed and how they related to each other. Each element had to be understood and clearly described (in writing) to arrive at a precise meaning. Once we had a definition (which was not always possible), the elements had to be compared and their relationship to the wider theoretical claims clarified. We then developed a set of diagrams that led to a model that represented our developing thoughts around the concept. These abstract ideas about the process are illustrated and mapped out step-wise in Figure 8.1.

We suggest that the steps will be second nature to an experienced researcher, but a useful guide to the novice, and a reminder that concept formation should always be at the forefront of a research project, with established theory having a central role in this process. The method outlined in Figure 8.1 contains procedural elements, however abstract they may seem, and using these systematically can provide scaffolding for this key skill. Providing systematic ways of learning how to review the literature is the main theme for this chapter.

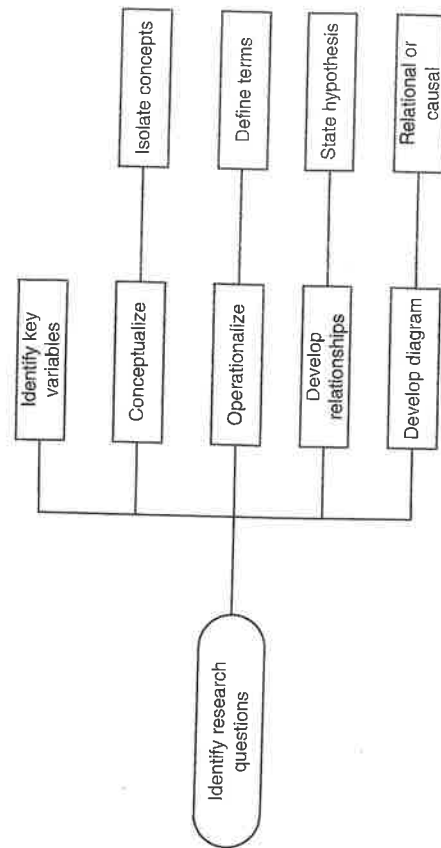


FIGURE 8.1 Steps in developing a conceptual framework

2 How to engage systematically with the literature

In this section, we present a model for engaging with the literature. There are two steps. The first looks at how a researcher selects which articles to read, compiles summary abstracts and validates these. This stage is very similar to the procedure used in systematic literature reviews (see the further reading section at the end of the book). The second step is about the review itself and this is done in three dimensions that consist of description, synthesis and critique. We call the second stage the 'tripartite approach' and present a model that combines the two stages as a structured systematic guide. Once mastered, the skills can be used every time a researcher reads a journal article or book, regardless of the purpose of doing so.

Framing a research area for review

In this process, a researcher begins by identifying an area of investigation and establishes the context and purpose for the review. Quite often, purpose and context can be directly drawn from a research statement or question; however, in qualitative research this question may alter as the review progresses. The first step in framing is to follow the procedures for a systematic review of a research topic and develop inclusion and exclusion criteria for selecting materials. This process should yield all the published material on a topic (with respect to the criteria of interest) (see Figure 8.2).

Once the purpose of the study is clear and criteria for locating and including materials for the review finalized, screening the literature begins. Screening materials entails identifying and categorizing published work and establishing what constitutes 'relevant' materials for the review. A search strategy requires the formulation

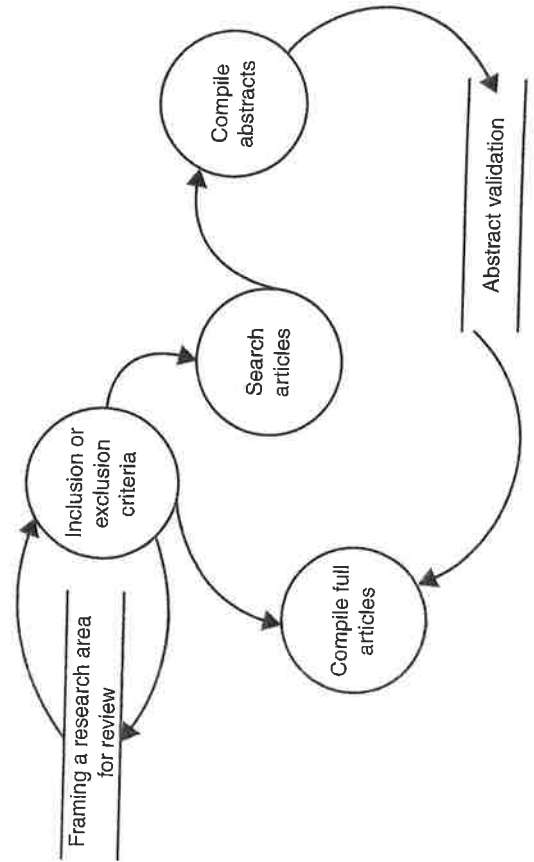


FIGURE 8.2 Framing a research area for review

of concrete search terms and for new researchers (especially postgraduate students), we highly recommend seeking the guidance of a subject librarian with expertise in this area. Most academic materials are indexed and archived in different online databases, with the most notable of these being: Google Scholar, ISI proceedings, PsycINFO, EBSCOHost, JSTOR, Cochrane Reviews, Medline, Scopus, and Web of Science. Further investigation needs to be done from the initial search, because a database will provide a link for each article that has cited the research since the original article's publication. Of course the reference list at the end of each article lets the reader know who the author has cited. Writing summaries or 'abstracts' of each paper is essential (see Section 3 of this chapter on 'tools'). These abstracts can then be checked against the inclusion and exclusion criteria and validated through relevance to the overall purpose of the review.

Review process

There are three stages in the review process (Figure 8.3).

Tripartite I (description)

In this stage, the systematic reviews are examined firstly to present a descriptive summary of the key issues identified. This process should give an overview of developments in the field, the main areas of debate and the outstanding research questions. The overview is usually followed by the presentation of identified themes that have been carefully justified.

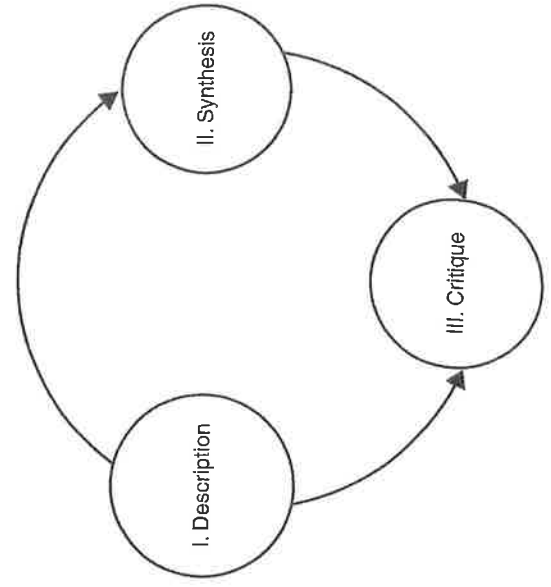


FIGURE 8.3 The review process

Tripartite II (synthesis)

In the second part of the review process, the researcher focuses on the synthesis of ideas. To do this requires the extraction of selected ideas or themes and a process of comparing and contrasting these to identify areas of similarity, difference and any controversies. Synthesis allows the researcher to clarify and resolve inconsistencies in thinking or tensions in the literature and thereby provides the best chance of making a genuine contribution to knowledge in the field. Through synthesis, the researcher places the topic or problem in perspective within the literature, demonstrates that he or she understands the broader field in which the research is situated, and that the particular problem of interest can be contextualized within the historical context of which the subject is being studied.

Tripartite III (critique)

In the third phase, the researcher reflects on the synthesis of the main ideas identified at the second stage, then develops a critical view of work reviewed in the light of claims and evidence available. It is important that there is validation of selected material and that it has been described correctly. It is only after thorough description and summary that a level of critical thinking and judgement can later be applied. Critical engagement requires the development of particular skills and strategies, and it particularly implies having the ability to closely examine claims against alternative evidence or views. It also requires a questioning mind and an openness to alternative views or evidence from other sources. Critique should include a positive dimension as the researcher aims to provide new ideas and alternatives. This attitude of mind contrasts with the idea of being critical in the sense of being dismissive. We make this point because we have observed novices being dismissively critical without being constructive. In the final literature report, there should be an account that includes the implications of the analysis.

The tripartite model

When the two parts (Figures 8.2 and 8.3) of the model are brought together, there is a full systematic process that a new researcher can follow to conduct a literature review (Figure 8.4). The components of the model and step-by-step process provide a checklist; however, the model also provides a schematic representation of the relationship between the different model elements.

3 Tools for reviewing the literature

It has been suggested by Onwuegbuzie and Weinbaum (2017) that there are two main ways to systematically examine the literature: the within-study analysis and the between-study analysis. These can provide an alternative to, or form part of, the tripartite model. Both within and between methods of analyses are done for

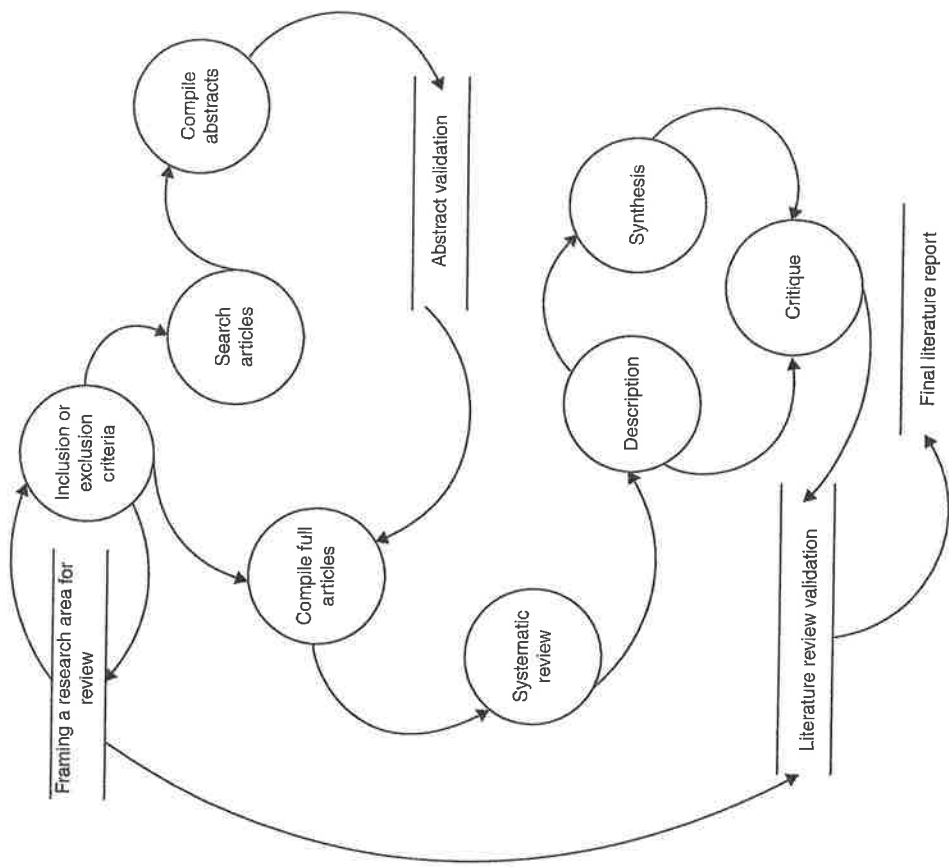


FIGURE 8.4 The tripartite model

the purpose of producing a more critical and engaging report of the literature. Of course, if this outcome does not eventuate, then the tools proposed will not have fulfilled their purpose and so have little utility. We provide an example of how a within-study analysis can be done, and then an example of a between-study analysis that is focused on synthesis of ideas in the literature.

Within-study analysis

The within-study analysis involves analysis of the entire content of a single article including the title, literature review section, conceptual/theoretical framework, procedures used, results and discussion (Onwuegbuzie & Weinbaum, 2010; see Table 8.1). It is systematic and comprehensive, going beyond the review abstract in the tripartite model, and includes a summary of findings and conclusions reached.

<i>Elements reviewed</i>	<i>Articles reviewed</i>
	Article 1 Article 2 Article 3 Article 4 Article 5
Aims/objectives	
Research questions	
Methods	
Theory	
Conclusions	
Limitations	
So what?	

This type of analysis is similar to doing a peer review of a journal article or a book review. A within-study analysis begins with identifying the aims of each article, the questions raised, methods used in answering the questions, and the theory that the authors draw from, as well as the conclusions reached.

An example of how this structure might be used is given in the box below in a within-study analysis of a journal article from 2007.

EXAMPLE OF A WITHIN-STUDY ANALYSIS

Article reviewed

Rayle, A.D. & Chung, K.Y. (2007). Revisiting first-year college students' mattering: Social support, academic stress, and the mattering experience, *Journal of College Student Retention: Research, Theory & Practice*, 9, 1: 21–37.

Aims/objectives

The purpose of this study was to investigate the concept of student 'mattering' and defining it. Concepts comprise students feeling included by their peers, feeling they were important to the institution and feeling supported by family. This is not a novel concept and the authors admit this in the first sentence of the abstract where they state they are revisiting a previously discussed theory from Nancy Schlossberg.

Research questions

Does social support from friends and family predict mattering to university friends and the institution? Does social support from friends and family, and mattering to university friends and to the institution relate to a level of academic stress? Do male and female students differ in social support, academic stress, and mattering to university friends and the institution?

Methods

This research utilized three survey instruments, two of which were established, and the third created by one of the authors. First, the perceived social support inventory-friend scale (PSS-Fr) and family scale (PSS-Fa) assessed the perception of support from both family and friends. The Daily Hassles Index for College Stress (DHI) was then used to assess academic stress, and finally, the Interpersonal and General Mattering Assessment (IGMA) was used to assess the sense of mattering to others. Participants were recruited using a convenience sampling method, where all students were invited to participate. They were given time to complete the surveys during class resulting in a response rate of ~87%.

Theory

The study draws on a link between social support from both family and university friends to the perceived amount of mattering. Regarding feeling included in the university environment, the most important link discovered was between the social support of friends and the university environment. These two phenomena (family and university friends) could predict academic stress levels. The more social support, and the more support from family and friends, the less likely students were to be stressed in their first year. Gender was also a strong contributor to academic stress and feelings of mattering. Females felt like they mattered more to family and friends, and reported higher levels of academic stress.

Conclusions

Social support from family and friends is essential in developing a sense of belonging or mattering in a university environment, but equally importantly the development of new social networks and new friends contributes to decreased levels of academic stress once at university. Females tend to feel the stresses of academic life more acutely, as they feel like they matter more to their family and social support networks. In this sense, mattering has both positive and negative connotations.

Limitations

This study was limited to students from one first-year course at one university in the US. It only utilized established surveys, rather than surveys and interviews. These surveys will provide a limited range of views and responses.

So what?

This work builds on earlier studies by investigating this concept of 'mattering', where it is evident that forming new relationships and social support is just as critical as having existing family and friend support. Probably the most important contribution is in the different pressures that male and female students experience as part of their first year at university and suggestions on ways to minimize this.

TABLE 8.2 Synthesis of the articles reviewed

<i>Elements reviewed</i>	<i>Articles reviewed</i>
	<i>Group...1(articles) Group...2(articles) Group...n(articles)</i>
Summary	
Shared conclusions	
Contrasting views	
Current debates	
Outstanding questions	

Between-study analysis

In contrast to the within-study procedure, a between-study literature analysis involves comparing and contrasting key findings or summaries from more than one source of literature. When there are multiple concepts or questions to be considered in a research project, then a systematic grouping of articles can be performed. Usually the researcher is interested in the common concepts related to the research question and so will focus on specific article elements. In this way, an analysis can be done either 'by group' or 'by element'. So in Table 8.2, the focus could be on comparing all the group 1 articles with group 3, or on a synthesis of the summaries or conclusions from all groups.

4 A non-systematic approach

This example is not a tool or an approach but is included to contrast the structured methods of review with what might happen when the researcher has been reading in the literature for a number of years. Our inquiries have shown that those with more experience in research often find it difficult to explain how they approach the literature, and therefore in Figure 8.5 we provide a short written reflection that captures the lived experience of engaging with the literature and carrying out research. When we are teaching this part of research methodology, we often find the sorts of decisions we have made in our own work hard to describe. It is partly for this reason that we developed the tripartite model.

Conclusion

Engaging with the literature prior to data collection or theory development is a significant undertaking. A review allows depth and breadth of knowledge to be developed in a particular subject and highlights knowledge trends and existing academic debates and helps frame important research questions. Importantly, the process of review is crucial to concept formation, which is essential to guide the full research process and contribute to new theory. A review of the literature involves

As a research scientist, I knew every paper written in my highly specialized subject from the late 1800s to the latest articles. I read them all from cover to cover. They were printed, kept in boxes labelled A to Z and so formed my reference collection. When I later started higher education research, this simple working convention did not apply to my new field. In particular, I could not find established independent groups of researchers, working in the same subject and who built on each other's findings and theories. Whenever I thought I had found such a group, I realized that each researcher or team was essentially working independently, typically in unique contexts, and at best drawing on parts of others' work to support their own findings. So whichever higher education subject I was interested in, nearly all the journal articles on that subject could add something to what I already knew, but seldom had the power to transform my thinking (in the sense that I would understand the field in a radically different way). In other words, few articles have ever had anything worthwhile to say to me, although most would contribute in a small way to my research. The few that have something worthwhile to say are precious. Of course this is not a problem for the research itself, nor is it caused by my high expectations of others' work. I think it is because I approach the work I do with a conceptual idea already framed. Let me give two examples that might illustrate this.

Conceptual ideas

I generally start with a conceptual idea because it seems to me the best way of making a theoretical contribution to knowledge. In this context, I seek research that will help me to achieve this goal. My strategy includes quickly skim reading small parts of many journal articles that appear to be written on the same topic. If the article seems promising, then I might carefully read the last paragraph of the conclusion. If there is something in this, with respect to my conceptual thinking, then the article gets more attention. I do the same for books and chapters but the skim reading takes a little longer (although I get a lot of help from keyword searches in a PDF viewer). I then explore other knowledge fields that I have a hunch might also contribute to my central idea. These typically include reading in areas such as philosophy, history, sociology and, less frequently, psychology. I also have a high respect for quality journalism and have also learned much from novelists who often have very interesting things to say about the human condition. And then I learn from the many conversations I have with colleagues about what I am trying to work out, and the feedback I get from seminars and conference presentations.

Applying established theories

A second approach is when I am seeking to understand an established theory and apply this in research and practice. Then I read everything on this theory: all the articles and books from start to finish, frequently re-reading them many times. It feels much more like being a scientist in this sense, although I do find that the casual use of the English language often leaves me guessing if different authors are really talking about the same thing. Interpretation of meaning then becomes part of this challenge but the rewards for effort seem to be high.

The hunt

So I see myself as a hunter tracking down ideas that will help me achieve my goal, and like any hunter, I have more than one strategy for conducting the chase. And although I may not always be successful, the effort is never wasted because something is learned and more experience gained. In this sense, what comes from my experiences of reading the literature will help me now or later, and no doubt form part of my subconscious that allows my thinking to progress. Holding on to this belief means I never feel that I am wasting my time.

gaining not only new knowledge but also analytical skills that can be put to use in a broad range of contexts. Facility for grasping the nature and use of argument and critical thinking all come from purposefully reading to gain a deeper understanding of ideas.

We have structured this chapter around the central idea that systematically engaging with the literature using structured approaches is the best way for those new to research and the study of higher education to learn. Our experiences of teaching research methods have clearly illustrated the difficulties this group faces when it comes to reading and engaging with published work. We have used the tripartite model to good effect and because students and academic staff have found it useful, we have some confidence in its broader utility. In particular, we think that it will have utility for learning about all forms of literature engagement, although this claim has not been tested.

In a practical sense, undertaking a literature review is necessary because without it one cannot evidence or justify the need to undertake any research, and it would be impossible to argue for a 'gap' in the literature. We address gap statements in Chapter 12, but include here a list of fallacies that we see in articles as justification for the importance of research. However, these must also be understood in the context of how articles are cited and so they are important ideas when reviewing and criticizing the literature. The fallacies are:

- Appeal to exaggerated research gap (nothing is known)
- Appeal to volume (multiple citing of unnecessary, unrelated or inconsequential work)
- Appeal to history (using historical knowledge to justify the rationale for carrying out a study)
- Appeal to emotions (soliciting credibility based on emotions)
- Appeal to authority (using the well-known figure to substantiate arguments rather than the worth of an argument)
- Appeal to fame (just because a piece of evidence is famous does not make it credible)
- Appeal to admiration (citing work based on friendship, acquaintance and respect)

If none of the systematic approaches to literature appeals, then one idea to consider is to follow Ernest Hemingway's advice and always have your 'crap detector' switched on (Postman & Weingartner, 1969). This colourful metaphor creates a critical image for novices and experts alike who should be sceptical about claims, never take them at face value, and always look for ideas based on good evidence or robust argument. For example, and with respect to the literature review, the poor way in which published work can be used and cited in articles is given in Chapter 6 on the single case. Part of a PhD student's training requires that he or she can demonstrate the command of an existing body of knowledge in their field. Students need to show that they are aware of the important debates and relevant research

problems, but also recognize that doing a literature review in a critical manner is essential to developing intellectual capability.

Finally, the literature review is a living document and should not be seen as the first part of a study and then compartmentalized as such. Our work in peer review picks out this inconsistency time and again in articles submitted to the journals we review for. Often it seems that the literature review was done first, before the analysis and conclusion were reached, and as such no longer fully aligns with the study. Similarly, a PhD literature review may include a lot of papers and ideas that no longer have any relevance to the project and how it has gradually developed and changed over the intervening years. A literature review should be done first and last and at every stage in between. In other words, re-visit the literature review before the project is deemed complete and ensure that all of it is relevant to the rest of the study being reported. A paper, chapter or thesis should always have some form of logical narrative without taking the reader in an irrelevant direction or providing them with tangential ideas.

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