

Reviewing Existing Research

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- Literature reviews can be approached systematically to locate as much relevant literature as possible. This chapter shows you how.
- Reviews are needed to identify what is already known, to bring together results from different studies, and to provide a starting point for new research.
- Reviewing involves defining the topic, identifying sources, evaluating the sources, synthesising and reporting.

Whereas single studies are often based on small samples and offer different results, a review can go beyond individual studies to identify trends and patterns in research findings. A literature review can be defined as follows:

A systematic, explicit and reproducible method for identifying, evaluating and interpreting the existing body of recorded work produced by researchers, scholars and practitioners. (Fink, 1998: 3)

Of course, there is a huge volume of research out there on almost any given topic, so any attempt to review the literature needs to be guided by a clear plan of action. There are different ways of going about doing a review, and this chapter will help you to decide on an approach and put together a plan.

Why you might do a review

There are a number of circumstances in which you might choose to conduct a review of the literature. Researchers (including PhD students) may need to summarise existing

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research to provide a platform for further work. For students, the literature review often takes the form of a discrete chapter in a thesis which seeks to summarise the 'body of knowledge' relevant to the chosen topic. Other academic studies take a similar approach, devoting a section of the final research report to a summary of the relevant literature. This 'foundation laying' literature review is perhaps the most common application of research review techniques.

In addition, research commissioners, such as funding councils and government departments, sometimes require literature reviews as ground-clearing exercises at the start of programmes of research. Reviews can also be used to survey a field in order to identify research gaps or directions and to help develop an agenda for future funding programmes.

These functions, though important, have in the past relegated research reviewing to the methodological wilderness, with limited debate about its role, conduct and quality. Increasingly, however, reviews have been commissioned in their own right for quite different purposes. Researchers and research commissioners are promoting reviews as an opportunity to go beyond the individual study (with all its weaknesses) and to seek out and synthesise the huge body of research that already exists on almost any topic. Reviews have become a crucial part of the 'what works?' agenda in the UK, with its focus on finding out which public policy interventions are the most effective in bringing about change (Davies et al., 2000). As a result, literature reviews are finding their place as a mainstream research methodology. They offer new analytical insights and fresh ideas, and skills in reviewing will soon be an indispensable part of the researcher's methodological portfolio.

Why might you do a review?

- To understand what you know already about a given topic
- To identify gaps in the evidence base or generate a research agenda
- To build a platform for future work
- To complement primary research
- To 'go beyond' individual studies on a given topic
- To use the individual studies as data to explore a topic or question

The need for more 'recycling' of existing research is now widely accepted. At the very least it makes sense to check whether a research study has, in effect, been done already.

It is sometimes surprising just how much research there is, even in relation to quite specific topics. For example, a team at Glasgow University in Scotland conducted a literature review on the topic of gentrification – the rejuvenation and renovation of run-down urban areas by the middle class (usually resulting in the displacement of resident lower-income communities). This might be assumed to be a relatively small and specialised field of study. However, the search identified research from all over the world, including Australia, Europe and North America. The research team identified 17 existing literature reviews on the topic, in addition to the mass of primary research (Atkinson, 2002).

Literature reviews should be undertaken to the same high standards as primary research. Reviewers need to demonstrate clarity of purpose, use appropriate methods and demonstrate objectivity and rigour in their work. Review findings and methods should also be clearly reported.

By taking each step of the review process in turn we shall consider how to conduct a good-quality review that is something more than a dry summary of the state of knowledge on a given topic. The key steps of the review process are:

1. Defining the review topic or question
2. Locating sources
3. Judging the quality of studies identified
4. Synthesising the studies identified
5. Reporting the findings of the review

It is worth noting that, while the stages are presented as a linear process, most ‘real world’ reviews do not follow a simple progression through stages 1 to 5. For example, searching often continues (or should continue) throughout much of the review process as the reviewer develops a closer understanding of the topic.

Review methods

At first glance there seems to be a suite of literature review methods from which to choose. Common terms you might have come across include literature review, scoping review, systematic review, narrative review, meta-analysis and rapid review. However,

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on close inspection, the terminology is confusing and unhelpful. The list does not constitute a menu of methods.

There is a growing interest in conducting reviews more systematically and transparently (Boaz et al., 2002). There are a number of organisations, such as the international Cochrane and Campbell Collaborations, which support the conduct of systematic reviews in health, social welfare, criminal justice and education (see the Further Reading section at the end of this chapter for more details), and various organisations have produced 'how to' guides and training for individuals interested in using this approach. These include the CRD report 4 (NHS Centre for Reviews and Dissemination, 2001) and the EPPI-centre review companion (eppi.ioe.ac.uk/EPPIWebContent/downloads/ReviewGroupCompanion.doc).

This chapter does not seek to replicate these comprehensive resources. Instead it discusses some general principles that might apply to anyone conducting a good-quality literature review. Illustrations are drawn from two reviews of the literature on mentoring (Table 2.1). Mentoring is used as an intervention in a wide range of settings, including education, youth justice and the workplace (Boaz and Pawson, forthcoming). Mentors act as role models, counsellors or teachers, providing support to mentees with less experience. The mentoring reviews discussed here describe themselves differently (as a literature review and a meta-analysis), but they have common features, as we shall see below.

Defining the topic

Focus

When embarking on a review of the literature it is important to think carefully about its focus. Reviewers too often try to cover everything there is to know about a given topic, an over-ambitious goal that usually results in a review with little space to reflect on the literature identified. While the first of the mentoring reviews addresses a relatively tightly defined topic, the second sets out to answer a whole set of questions, including: what is mentoring, does it work, what makes it work and how is it viewed by different stakeholders? The sheer volume of literature identified presents a daunting task to the reader.

As with good primary research, systematic review guides promote the development of a precisely defined review question in the hope that this will lead to a more focused

Table 2.1 Two reviews of the mentoring literature

Bibliographical details	Type of review (author description)	Main findings
Dubois, D., Holloway, B., Valentine, J. and Cooper, H. (2002) Effectiveness of mentoring programs for youth: a meta-analytic review <i>American Journal of Community Psychology</i> 30(2): 157–197	A 'meta-analysis'	There is evidence that mentoring programmes are effective interventions (although the effect is relatively small). For mentoring programmes to be as successful as possible, programmes need to follow guidelines for effective practice. Programme characteristics that appear to make a difference in promoting effective practice include ongoing training for mentors, structured activities, frequent contact between mentors and mentees and parental involvement.
Hall, J.C. (2003) Mentoring and Young people: A Literature review The SCRE Centre: University of Glasgow, 51pp	A 'literature review'	Mentoring is an ill-defined and contested concept. The US evidence suggests that mentoring is an effective intervention, although the impact may be small. Successful mentoring schemes are likely to include: programme monitoring, screening of mentors, matching, training, supervision, structured activities, parental support and involvement, frequent contact and ongoing relationships. The UK literature concludes that mentoring needs to be integrated with other activities, interventions and organisational contexts. Most mentors are female, white and middle-class, and report positive personal outcomes, including increased self-esteem.

review. In its original form in medicine, reviewers have been encouraged to formulate their review question in the way shown in Figure 2.1.

For example, are young offenders (the population) who undergo a mentoring programme (the intervention) less likely to re-offend (the outcome)? How do they fare compared to other young people who have not been involved in the mentoring programme (comparison, control and/or context)? While many of the questions reviewers address in social policy areas are more complex than this, it is sometimes useful to apply this simple formula (called PICO – Population, Intervention, Control, Comparison and/or Context and Outcomes) when thinking about a review question.

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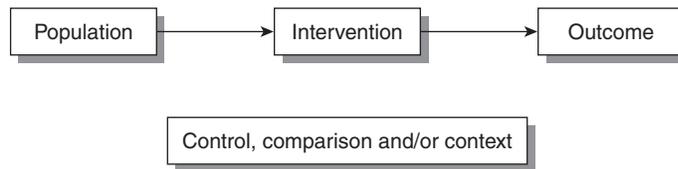


Figure 2.1 Population, intervention, control, comparison and/or context, and outcomes

Scope

It is also useful to consider a number of other dimensions that will have an impact on a review's scope, and thus on its findings. For example, will the review contain literature from one country or from a range of countries? This can be an issue of real significance. Consider, for example, what the implications might be for a UK review of gun crime that relied only on literature from the USA, where policies towards gun ownership are very different from those in other countries.

It is also important to think carefully about the time period covered by the review. The coverage needs to be congruent with the review question. For example, a review of the impact of mobile phones on communication skills might only consider looking at the literature from the last ten years (although it has been argued that the first mobile phone was invented in 1924! – see www.galaxyphones.co.uk/mobile_phones_history04.asp). If the time period has not been dictated by the review question, there has to be some explicit reason why this is the case (e.g. lack of time, resources etc.). The Dubois mentoring review examines literature from 1970 to 1998 and the Hall review focuses on research published after 1995. Neither reviewer is explicit about their reasons for choosing a particular time period.

Most reviews only include research (as opposed to evidence contained in policy documents and articles in newspapers and magazines). Non-research evidence is often sidelined on grounds of quality. Reviewers are concerned that the evidence in newspapers and policy documents cannot be trusted. However, there have been some attempts to open up a debate about the quality and contribution of different types of evidence (Grayson et al., 2004). In particular, non-research evidence can often provide useful information about context and can help to fill gaps in the research evidence base.

Sometimes reviews even focus on specific sorts of research, usually reflecting the terms of the review question. For example the first review in Table 2.1 includes

only studies that evaluate interventions because the review question focuses on the impact of mentoring. However, the second review looks at a wide range of review questions and pulls together lots of different types of research to address them.

Defining the topic: the mentoring review

The Hall review sought to address the following list of questions: What is a mentor/mentoring? What works/doesn't work? What is the evidence of positive outcomes for young people? Is there a case for regulating mentors? What are the views and experiences of mentors and mentees? What are the views and experiences of commissioning bodies and/or employers? The review included research from the UK and 'other relevant countries' from 1995 onwards.

The Dubois review focused on the impact of mentoring programmes on youth. The review included evaluation studies that used either before and after comparisons or control groups. The review focused on research published between 1970 and 1998. All the studies seem to be from the USA.

It is important that all these details about the scope of the review are written down in a protocol or project plan. This has the advantage of recording the reviewer's decisions for all to see, thus promoting transparency. For example, the scope of a review is often progressively narrowed for practical reasons, such as lack of time and resources (translation costs for large numbers of papers can be high, for example). It is important to articulate these issues to allow readers to place the review findings in context. It also allows the reviewer to revisit his or her decisions later on in the review process.

Locating sources

Searching

Searching for the raw material of a review is about much more than pulling down a set of books off the shelf. In order to find as much literature as possible that is relevant to the topic or question, a research reviewer needs to employ a range of tools and techniques. The search might typically include: a key word search of relevant databases, internet searches (discussed in more detail in Chapter 3), hand searches of key journals and a search through the bibliographies of papers, reports and conference proceedings. These more formal approaches are often complemented by informal

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contact with key individuals working in the field under review. This strategy is particularly useful for picking up unpublished research and work in progress.

Database searching is the most common approach to identifying the literature. Electronic bibliographic databases are particularly strong in the peer-reviewed academic literature, but can also cover the grey literature (unpublished research and/or research from non-academic sources) and PhD theses.

Some well-known social science databases

- ASSIA (Applied Social Science Index and Abstracts)
- ERIC (Educational Resources Information Centre)
- IBSS (International Bibliography of the Social Sciences)
- Sociological Abstracts
- Criminal Justice Abstracts
- Worldwide Political Science Abstracts
- INSIDE (British Library database)

Searching for mentoring studies

The Hall review searched the following databases: ERIC (Educational Resources Information Centre), BEI (British Education Index) and ERS DAT (the Educational Research in Scotland Database), looking for the key word 'mentor'. The reviewer also searched relevant websites, checked lists of references in other literature and contacted key individuals in the field, requesting copies of any relevant documents.

The Dubois review searched the following databases: PsycINFO, ERIC, Medline and Dissertation Abstracts, using both subject (index) terms (e.g. mentor) and free text words (e.g. the names of popular mentoring schemes). The reviewers also searched the internet using several search engines, and checked the reference sections of the studies identified for inclusion to check that nothing had been missed.

Reviewers in the social sciences can face significant problems as a result of the multiplicity of electronic databases (small and large, general and specialist, free and priced),

their variable coverage of the different kinds of publication media in which useful social science evidence appears, and the need for skills and experience to carry out thorough searches (Grayson and Gomersall, 2003). These difficulties make the support of information specialists of particular importance, and reviewers often draw on the support of information scientists and librarians in designing and carrying out searches. However, courses are also available for researchers and reviewers interested in developing their own search skills. For example, the NHS Centre for Reviews and Dissemination at York University in the UK provides sessions on literature searching as part of its three-day course on systematic review and critical appraisal, and the ESRC Evidence Network also runs day courses on search skills. There are also some developments designed to improve access to social policy research, including the launch of a new database entitled 'Social Policy and Practice.'

It is unwise in any review to rely solely on the results of database searches. Careful reviewers will hand search key journals and other bibliographic sources, and scan the bibliographies of all retrieved papers, reports and books to pick up related material. They will often complement searches of bibliographic databases by looking at research databases (e.g. the ESRC's REGARD database) or at conference proceedings (e.g. via the British Library's INSIDE database) to identify relevant ongoing and unpublished work. Contacting professional networks and experts in the field to check for gaps and to identify any very recent or unpublished research can also be very productive.

To facilitate the search for relevant material a search strategy is recommended, making it clear to readers of the review how the studies included were identified. The search strategy is likely to outline the key words used to search databases. For example, the search strategy for the Hall review on mentoring and young people looked for papers that included the search term 'MENTORS', but excluded a long list of terms alluding to other types of mentoring, such as 'NURSING EDUCATION', 'TEACHER IMPROVEMENT' and 'GRADUATE STUDY'. It might also include a list of databases, contacts to be followed up, websites to be checked, etc. The strategy is likely to be an evolutionary process, probably beginning with fairly broad searches to establish the main outline of the topic, followed by a series of more detailed searches as the reviewer develops a closer understanding of the issues. Searching may continue throughout much of the review process and should be carefully documented, with details of the sources and search terms used.

Sifting

Using a broad set of search terms on a number of databases is likely to identify a very large number of papers. Many will be irrelevant to the review and an initial sift can

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often be done on titles. For example, a literature search for a systematic review on new roads (including bypasses) identified 23,000 studies, many of which were concerned with coronary artery bypass operations rather than road bypasses (Egan et al., 2003)! Papers that look promising based on their titles can be checked for relevance through abstracts or summaries, although it is important to remember that the quality of abstracts in social science databases is often inadequate and the choice of 'promising' papers should be liberal. The roads reviewers ordered 700 papers, of which 100 were relevant to the review. Of these, 32 met the inclusion criteria (the reviewers were only interested in the impact of roads on human health so environmental studies, for example, were excluded). In a review such as this, which has a tightly defined question and quality criteria, the reviewer will often only need to read a small subset of the papers identified through the initial searches. A PhD student doing a review for thesis purposes, or a researcher doing a scoping review with a broader question (and no quality threshold) may well have to read a great deal.

In order to manage the task of sifting and sorting, many reviewers use a data extraction tool to record basic information about the individual studies identified, such as title, author and key findings. The advantage of completing a sheet about each study is that it acts as a record for the reviewer and can be a useful resource for anyone aiming to update the review. At the very least, a reviewer should make a note of the full reference for each study, either in a word-processing package or in a reference organising programme such as Reference Manager or EndNote.

Judging quality

A reviewer may decide to include all the literature relevant to his or her review topic. Here 'fitness for purpose' (or fit with the review topic or question) is the primary concern when deciding which studies to include in the review. This is the approach used in the Hall review on mentoring.

In particular, some reviews aim to include in scope all the relevant literature identified through searching in order to understand what is known about a given topic. Similarly, a review aiming to identify gaps in the evidence base or to generate a research agenda is often less concerned with the quality and more concerned with the coverage of existing research. While occasionally a reviewer might focus on the studies that offer the most explanatory power or the clearest conclusions, they have rarely explicitly excluded studies on methodological grounds.

In contrast, systematic reviewing has brought with it a renewed interest in the methodological quality of the studies identified as potentially relevant for review. This approach involves the use of quality criteria, frameworks and checklists to sift out poorer quality studies (e.g. studies with inadequate sample sizes). Where possible, review teams try to employ more than one person in the appraisal process.

However, choosing to exclude studies on the basis of methodological quality is not without its challenges. Perhaps the biggest problem is the lack of transparency in the reporting of primary studies. Often crucial methodological details are missing from research papers and reports, whether as a result of oversight, the pressure of word limits or the perceived low importance of methodological details.

A further difficulty can arise if the majority of the evidence relevant to the review question is deemed to be of poor quality. Here reviewers get caught in a trade off between the quality of the research, the relevance of the research to the review question and the current availability of evidence. One review team, considering the evidence on water fluoridation, got around this problem by reporting a wide range of evidence of different quality, but presenting it with a quality mark of either A, B or C to allow the reader to decide whether to consider the poorer quality results (NHS Centre for Reviews and Dissemination, 2000). Many review groups seek to address the issue of poor-quality evidence on their chosen topic by setting out a clear agenda for future research at the end of the review. Even if they cannot come to firm conclusions on the topic, reviews offer a valuable opportunity to reflect on the quality of, and learn from, the conduct of other research.

For some research methodologies (such as randomised controlled trials), quality criteria, tools and checklists abound, while for others it is difficult to find a critical appraisal tool to use (NHS Centre for Reviews and Dissemination, 2001). Within the social sciences there is a lack of consensus on what counts as good-quality research in some areas, such as qualitative research, while some researchers argue that the appraisal of quality is inappropriate and unhelpful (Pawson, 2004).

Whether or not reviewers use formal criteria or checklists, their own judgement of quality is a crucial element in any review. This is informed by their private understanding of what should count as a useful and reliable piece of work. However, seeking to articulate this process of judgement (for the benefit of the reader) is a challenge for the reviewer.

The two mentoring reviews discussed here took different approaches to appraising the quality of the literature.

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Appraising the quality of mentoring studies

The Hall review sifted the papers on their relevance to the review.

The Dubois review team first sifted papers on their relevance to the review question. Second, as the review was concerned with effectiveness, they excluded studies that did not evaluate the effectiveness of mentoring programmes using specific research methods: either studies with a comparison group (controlled studies) or studies that compared participants before and after participation in the programme (pre and post-test studies). No details are given of any quality checklists or criteria applied to these studies.

Synthesising results

Perhaps one of the biggest challenges facing the reviewer is how to make sense of the mass of literature identified, retrieved and neatly piled ready for analysis. Most reviewers hope to pull together the research into a chapter or report that says something additive, that is, the plan is to produce a review that is greater than the sum of its individual parts (or studies).

The extent to which the studies are integrated in a synthesis depends in part on the purpose of the review (for example, a review might aim to give an overview of the current literature, and thus just order and assess coverage rather than integrate) and in part on the methods used (for example, a meta-analysis combines data from individual studies).

Perhaps the most straightforward approach to bringing the literature together is to describe each study briefly and draw some conclusions. This is less of a synthesis, more a description of the literature. Sometimes, it might take the form of an annotated bibliography, or it may consist of paragraphs of text describing the different studies in turn. The moment of synthesis then rests in a section that draws conclusions from this descriptive text.

However, some reviewers have tried to achieve a greater degree of integration. For example, the most common methodology for synthesis in medical research reviews

is meta-analysis (Egger et al., 2001), a way of numerically combining the results of existing studies in order to calculate the size of the overall effect for an intervention. However, meta-analysis is only possible where there are appropriate and comparable quantitative data from more than one study. This is rarely the case in social policy research, where multiple outcomes lead to diverse measures, and where quantitative data may be entirely lacking.

Synthesising mentoring studies

The Hall review organised and synthesised the literature around a set of questions provided by the review commissioners. All the literature relevant to each question was described under question headings. For example, in addressing the question 'Does mentoring work?', the review draws on a similar evidence base to the Dubois review (and the Dubois review itself), whereas in addressing the question 'How is mentoring viewed by different stakeholders?', the review draws together a very different literature.

The Dubois mentoring review synthesises the literature in a meta-analysis of the 55 relevant studies identified. The review team had to find a way of pooling together very different outcome measures (such as school achievement, attendance and employment) in order to conduct a meta-analysis.

Where the quantitative data cannot be integrated in a meta-analysis, or where the research identified is largely non-numerical, other forms of synthesis are necessary. It is possible to organise the content of the review in other ways, for example, around themes or questions (as is the case with the second mentoring review), around methods (What do all the surveys tell us about the attitudes of mentees to mentoring schemes? What do all the case studies tell us about the ways in which mentoring schemes are set up and run?), or around some sort of taxonomy or model. While these methods do not necessarily call for the same level of integration, they add a degree of organisation to the information presented.

The difficulties of applying meta-analysis and other methods of synthesis developed within a medical context have encouraged social scientists to develop new approaches, including Realist Synthesis and Meta-ethnography. Realist Synthesis is a theory-driven

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approach (Pawson, 2002) that aims to use the literature to expose and articulate underlying assumptions about how a policy or programme is intended to work. Rather than passing a straightforward 'it works' or 'it doesn't work' verdict on a policy or programme, Realist Synthesis aims to explain how an intervention (such as mentoring) works, why it works and in what circumstances it works. As such, the review involves both theoretical thinking and an empirical testing of this thinking through an exploration of the literature.

First developed by Noblit and Hare (1988), and further developed by Campbell et al. (2003), meta-ethnography uses a qualitative, ethnographic approach to synthesise qualitative research. This method involves identifying key concepts from the individual papers and seeking them out in the wider literature. Noblit and Hare argue that this approach can be used to go beyond individual studies, comparing, challenging and providing new insights.

In the social sciences, narrative descriptions of the research identified remain the most common form of synthesis, and these new methods are still in a relatively early stage of development. Synthesis remains one of the most intellectually challenging aspects of the review process, and one that invites the reviewer to think creatively about how to present the mass of literature in a meaningful way to potential readers.

Reporting

The final hurdle involves the important tasks of reporting and communicating the review findings. Reviewers are encouraged to be as transparent as possible about the process they used to conduct the review. Methodological information does not need to be given in the opening chapters of the report, but should be included (often in detail as an appendix). Furthermore, a full bibliography of papers referenced in the review should be included. Where the reviewer has used data extraction forms, these are sometimes reproduced at the back of the report in an appendix or in a separate volume. One of the advantages of such clear reporting is that the review can be updated by the reviewer or by someone else interested in the topic.

The approach to writing up and sharing the findings of a review will depend on the purpose for which the review was undertaken. For example, some reviews will be conducted for largely internal purposes, such as for a PhD or to inform a new

project. However, where a review has been commissioned or has things to say to a wider audience than the review team, it is important to consider carefully the communication of its findings. Reviews can be over-long, turgid documents, as thick as telephone directories (but less accessible). At the very least, the document needs to be navigable and to have a short, well-written summary. The *Findings* series produced by the UK Joseph Rowntree Foundation is frequently cited as an example of good practice (www.jrf.org.uk). Short papers, for example in journals and magazines read by practitioners, can also be a useful method of disseminating the findings of a review.

Often it is difficult to anticipate the future uses of a review. As literature reviews can be invaluable sources of primary literature for future researchers, it is recommended that a copy is sent to the national copyright library (such as the British Library in the UK).

In addition to short summaries and articles, there may be a need to present a review orally to interested parties. Increasingly, formal reports and presentations are also complemented by web-accessible versions. Writing and communicating research findings are discussed in more detail in Chapters 8 and 9.

Management of a review

A protocol is a map or plan of the review process that provides an opportunity to think about crucial issues, such as the resources of time, skills and labour needed to complete the work (NHS Centre for Reviews and Dissemination, 2001). A protocol should not be set in stone and can be revisited and changed as the review progresses. Issues of project management are discussed in more detail in Chapter 6.

While literature reviews have traditionally been seen as a one-person, desk-based activity, they can also be conducted by teams. The advantage of this approach is that a mix of expertise can be brought together. For example, a review team might include an information specialist, a subject specialist and a methodologist with knowledge of review methods. More than one person can be involved in independently appraising the studies in order to try to reduce bias. Like primary research, reviews also often benefit from the support of an advisory group. For example, this was the case for the second review in Table 2.1. Where the review is a lone pursuit, advice from an information specialist, in particular, can be a real advantage.

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Case study: A student's perspective on reviewing literature

Adrienne Sidford

I think that most researchers and students can look back on a moment where they got really 'lost' when doing a review. I was looking at evaluation within both policy and public health domains. Before beginning my study I needed to have evidence to support the evaluation method being used, as well as evidence setting the context of previous evaluations.

The review soon became much bigger than me, growing as I was side-tracked. My questions for the review were vague, partly because I had little understanding of the area. The more I read the more I became embroiled in the ongoing debate surrounding evaluation and the views of different researchers' paradigms regarding the discipline/ methodology (positivist vs constructionist). I became bogged down in the fine detail and was trying to solve a debate that will continue to permeate through the social sciences. Also, my initial plan for the review was not allowing me to highlight central themes and I became more frustrated. I found I was unable to tease out the story as I was not really sure what I wanted. I had not really accepted that although my main reason for doing the review was to look at how evaluation had been carried out in public health and policy, it was also to provide a rationale for the method that my study was using. Unsurprisingly, my review was going around in circles!

After some discussions with my supervisors, I took a break from the review, reflecting on the problems I had encountered. I came back to it able to see the whole picture, discussed it with colleagues and managed to focus the review to get it to answer all my questions. Writing reviews is both a painful and exciting process, involving a lot of detective work. The reward is a fuller, more powerful argument for the study I am conducting, and a greater understanding of where my study sits within this body of knowledge.

Conclusions

Literature reviewing is a research method and quality considerations apply as they do to all research methods. A review should be conducted in a rigorous and transparent manner and address a clearly defined question or topic. It should be based on a thorough and fully documented search. The reviewer should consider the studies identified in terms of their fitness for the purpose of the review. The reviewer might also appraise the studies and include only those of good methodological quality. A method

must be chosen (or devised) of pulling the results of the different studies together to produce a review that is more than an untidy pile of primary studies. Finally, the reviewer must also consider how best to communicate the findings to different audiences. The entire process can be improved by the use of a protocol outlining the proposed review approach, including the search strategy.

This may sound like a lot of work, but well-conducted literature reviews can have something powerful to offer a range of different users, including researchers themselves, policy makers and practitioners. A literature review goes beyond the common reliance on commissioning a new study or relying on one piece of research. Recycling research is likely to be of more and more use to the research community in the future.

Further reading

Davies, H.T.O., Nutley, S.M. and Smith, P.C. (2000). *What Works? Evidence-based Policy and Practice in Public Services*. Bristol: The Policy Press.

Fink, A. (1998). *Conducting Research Literature Reviews: From Paper to the Internet*. Thousand Oaks, CA: Sage.

Relevant organisations and websites

Campbell Collaboration: www.campbellcollaboration.org

Building on the experience of the Cochrane Collaboration, Campbell has been set up to carry out reviews of interventions in the fields of education, criminal justice and social welfare. The website currently includes guidance on protocol construction, specimen protocols and other information. The first Campbell Review on Scared Straight initiatives can be downloaded from both the Campbell and Cochrane websites.

Cochrane Collaboration: www.cochrane.org

The Cochrane Collaboration prepares, maintains and disseminates the results of systematic reviews of research on the effects of health care. The Cochrane Library is a quarterly updated electronic database of reviews. The Cochrane *Manual* and the *Reviewer's Handbook* are available online.

ESRC UK Centre for Evidence-based Policy and Practice: www.evidencenetwork.org

The Centre's EvidenceNetwork website is designed to act as a starting point for accessing key literature and information resources on evidence-based policy and practice. This is a useful site for identifying electronic databases, internet portals

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and other sources of information for literature reviews, and includes some basic advice on search techniques.

Evidence for Policy and Practice Information and Coordinating Centre: www.eppi.ioe.ac.uk

The Centre was originally commissioned by the Department for Education and Employment to provide a resource for those wishing to undertake systematic reviews in the field of education. A database of systematic reviews, and useful publications on systematic review methodologies are accessible via this site.

NHS Centre for Reviews and Dissemination: www.york.ac.uk/inst/crd

CRD carries out systematic reviews on selected topics in the health-care field and maintains a database of reviews (DARE). A number of useful documents, including *Undertaking Systematic Reviews of Research on Effectiveness* (CRD Report No. 4), are accessible online.