

Unit 2: Reviewing the Literature

What is a literature review?

A literature review has three aspects:

- 1) A search for all the available published sources –journal articles, books, reports, theses, conference proceedings, websites etc. that are relevant to your study.
- 2) A critical review, analysis and evaluation of these sources
- 3) An analysis and synthesis of the findings of your search in the form of a written review which will provide the contextual and conceptual framework for your thesis.

The review must not merely become a list and summary of sources that you have read. Although not easy at the beginning of your search, you need to enter into a dialogue with the debates in the literature, always engaging critically and evaluatively.

You must always acknowledge the sources that you have drawn from in the construction of your review. Failure to do so is plagiarism. Plagiarism can be described as the passing off, or attempting to pass off another's work as your own. To plagiarise is to behave dishonestly and those who undertake research should adopt the highest standards of personal and professional integrity (refer to Unit 5 Ethical Issues). Whether you are quoting directly or paraphrasing the work of others you it is essential to reference this correctly in order to indicate the original source(s) in the literature (see below for more information about how to identify the correct referencing technique for your School).

Reasons for undertaking a literature review

You need to immerse yourself in the literature of your field in order to understand the key issues, what others think and have found out, how your ideas fit into this, and how you can inform and develop your ideas. It will also familiarise you with relevant research methodology and how these methods are applied in practice.

You should undertake a review of the literature early in the study because:

- It is important to know the field well to locate areas or 'gaps' which may provide potential topics for study. This will help you to identify the context, scope and scale of your thesis.

- Only a position of knowledge will enable you to identify whether your research will be original.

However, you need to keep abreast of the literature throughout your research in order for your thesis to be up to date both in terms of the field you are researching and the methods that you are using. A very influential publication could change the direction of your study even when you have already started your research. However, at some stage you will need to decide that come what may you will abide by the specified project (Burton, 2000) whilst recognising the importance of any important publication that has appeared thereafter.

Understanding and evaluating different types of literature

You are likely to feel a little overwhelmed in the early days of your reading: there is a huge amount of literature, of many different types, and it may be hard to see how to cope with so many conflicting opinions and interpretations or know how to avoid reading too widely (Blaxter, 2006).

Punch (2009) distinguishes between the research literature and the theoretical literature:

The research literature reports empirical findings and by reviewing it you summarise the current *evidence* for a question or topic. The theoretical literature includes consideration of relevant theories, analyses and ideas, and by reviewing it you summarise the *thinking* about a question or topic.

Both elements are essential to a sound review

There are many sources of information that can contribute to a literature review. Table 1, adapted from Thomas (2009), summarises their strengths and weaknesses:

Source	Description	Pros	Cons
Article in a peer reviewed journal	This has been offered by the author to a journal to be judged by peers (other academics in the same field). They will decide if it is good enough for publication.	Only the best articles get published. You can therefore be sure of the academic standard (in theory).	The article is published for the author's academic peers, so it may not be straightforward or easy to read, it may give little attention to explain the wider context.
Article in a professional journal	May also be peer reviewed but will be judged primarily on its practical usefulness to	Likely to be of practical relevance.	It will not have been subject to such stringent scrutiny of the soundness of the

	the profession rather than issues of design and methodology.		research. May be simply the view of the author.
Authored book	Books vary in their 'scholarliness'. They will usually have been written as a major presentation of the author's work. But they may be explanations of other people's work.	Books written by a single author represent an extended academic treatment of a particular topic. Because they are by one person they have an integrity; they tend to 'hang together'.	Tend to be personal representations of a topic unmoderated by the comments of others—so this may be a very personal 'take' on the subject.
Chapter in an edited book	Edited compilations are books all on one theme brought together by an editor. These are like journals but without the same degree of peer review.	Good ways of gathering related material on a topic; editor generally an expert in the field.	Can be 'bitty' with some weak chapters interspersed with good ones. The multiple authorial 'voice' may be confusing.
Textbook	The work of others is summarised by the author with the particular purpose of meeting students' course needs	It may be a very good , effective summary.	Because the author is summarising others' work(secondary source) it may be susceptible to distortion. Can get out of date quickly.
Conference paper or proceeding	A paper that has been presented at a conference. When the conference papers are printed in a collection this is called 'proceedings' of a conference.	Usually right up to date, and often reporting work that is still in progress.	Conferences vary in their status, and often subject to only a minor form of peer review-therefore variable in quality
Thesis or dissertation	The ones that you will be able to gain access to will have been successfully submitted for Master's degrees or Doctorates	May be on a topic similar to your own. Quality is variable.	May be weak.Do not use as a model for your own. It may have only scraped a pass.
Magazine or newspaper article	Varied source that takes many forms.Some newspapers are as	Right up to date and can be used as a starting point which leads you to a more	Depend on good sales, so may distort material to make it more interesting. Reporters are subject to

	respectable as some journals, others are not.	reliable source	none of the peer review checking used in academic journals.
Websites	Varied source that takes many forms. A website is just a medium for carrying a range of sources and has no inherent strengths and weaknesses-it's up to you to judge.	Most websites carry reliable information, for example taking you to a publisher's website where you can download peer reviewed articles.	Some websites, even quite well known ones carry misleading information.

To judge the quality of a source, consider:

- Is the literature based on research evidence?
 - Is the research evidence based on sound research? Is the methodology sound?
 - Has it been peer reviewed?
 - Is it based only on someone's opinion? What authority do they have?
 - Are their vested interests involved that might bias the content?
- (Thomas, 2009).

Steps in undertaking a literature review

In today's research world, those undertaking research can engage with the academic community via electronic and manual routes. I.T. brings with it the potential of access to much larger amounts of data than previously encountered. Nevertheless, whichever route is used your basic needs remain the same: to define information needs; to locate sources of information to meet needs; to transform useful information to internal knowledge; to store relevant information; to manage the store so the information can be retrieved when it is needed (Orna and Stevens, 1995 cited in Burton, 2000). These headings can be used to describe the methods that can be used in searching ,reading and evaluating the literature.

Define information needs

A first crucial step in beginning your literature search is to decide on key search terms in order to identify sources, particularly where specific details of authorship or journal title are not known. So first of all extract key words or phrases from your title or a concise account of your anticipated research. These can then be entered into different

databases. If this does not generate sufficient useful responses you will need to think of alternative ways of expressing your search queries such as using synonyms. However be strategic in your use of key words e.g. you will need to sharpen your criteria if you wish to gradually narrow your focus and not end up with too much irrelevant information.

When conducting an internet search you can use certain connecting words to widen or narrow your search. These are called Boolean operators, for example:

- To narrow your search:

Use AND to connect terms e.g. poverty AND crime. This is the default situation if you do not type in any other operator)

Use an underscore to connect terms e.g. poverty_crime

Exclude words or phrases by using NOT e.g. poverty NOT crime.

- To broaden your search:

Use OR to combine terms e.g. schools OR nurseries.

Use an asterisk after a stem to search all words with same stem e.g. exclu* will search for exclusion, excluded. But be careful where you put the asterisk e.g. exc* would search for excommunicate, excrete and so on!

Locate sources of information to meet needs

Your supervisors

Your supervisors are your mentors as you explore and find your way through the literature. At least one member of your supervisory team should have a good knowledge of the relevant literature. You can expect your supervisors to help you to plan and structure your search; make suggestions about where and how to search including refining your area of focus; stimulate useful discussion and critical thinking to inform your reading and your research; and eventually when you start to write they should provide useful comments on planning, drafting and revising your thesis. Unit 1 provides more information about this.

Libraries

The TSD Library

The Learning Resource Centre at TSD will provide you with a Resources Guide for your discipline. This provides details of research resources that are available in the library including relevant journals; e-journals; newspapers ; electronic databases, gateways, websites, web resources. The library can also provide, by appointment, , an information and study skills consultation which on a 1:1 basis will provide training for on-line and off-line search and literature review skills. Off line methods include the use of card indexes, abstracts and microfiches.

Other academic libraries

Most libraries are too limited in their stock to be able to provide an adequate range of books and journals for your doctoral research. So you might want to consider other alternatives:

Join another library which is open to students from other universities e.g. the National Library of Wales is an excellent resource for most Humanities students and specialises in Welsh and Celtic material. You should also join SCONUL (the Society of College National and University Libraries) which will allow you to borrow material from your nearest university's library.

Use Inter-library Loan(ILL)–operated by the British Library Document Supply Centre but administered at your local library level, this will allow you to request material which is not held by the TSD Library. A charge may be incurred.

Take a trip to large national or leading academic library e.g.for students of education the Institute of Education in London would provide an excellent resource.

The Internet

Search engines may provide a first step to an overview of the field (e.g. <http://www.google scholar.com>). However the web can generate vast amounts of information, much of which might be useless. Therefore it is important to have search strategy which takes into account the source and quality of what you access. Internet gateways can help in this regard–they edit sources of information. Blaxter et al (2006) provide this example:

‘ A key gateway for social scientists is the Social Science information Gateway(SOSIG) , based at Bristol University. This accepts only worthwhile databases and sources and classifies them into subject areas. SOSIG is compiled voluntarily by a number of institutions and libraries: for example , the staff of the Fawcett Library edited the Women's Studies page. You can search the whole system by keyword, or just browse to see what is there.’ (p.111)

There are many key sites for different disciplines that offer research and bibliographic databases e.g. each of the research councils has a fully searchable database of research that it has funded, the British Library has a site that includes many parts of its huge archive (<http://www.bl.uk/>) .

As you accumulate sources for your literature review, it is important to have a system to organise and store this information. Traditional methods such as card files are still used by many, but modern software packages provide a powerful tool for managing your references. Our university supports the commercial software RefWorks for this purpose. Speak to your supervisor or a member of staff in the Learning Resource Centre for more information about this. There are also free software applications available. For example, the internet browser Mozilla Firefox provides a tool called Zotero that can store, organise and optionally back up your research materials. It can be used to organise your literature search, or more comprehensively to assist in the implementation of your research project. It works within Mozilla Firefox, adding an extra button that activates or hides the Zotero interface, giving you a large amount of added functionality when you need it and staying hidden when you don't.

Some of the main benefits of Zotero are:

- It's free
- It lets you organise research in a variety of ways
- It saves web pages in the state they were when you visited them
- You can annotate your research items and highlight portions of text
- You can automatically generate a bibliography from any number of items , using any referencing system
- You can use the same library of research on all machines that you work on
- You can integrate your word processor with Zotero for even more flexibility

Details of how to install and use it are provided in the further reading and resources section of the module.

Transform information to internal knowledge

As you become more familiar with the literature in your field you will find it easier to use scanning techniques to quickly judge the usefulness of reference before deciding whether to read it. A first inspection should include the author's credentials(previous publications, place of employment, whether frequently cited in other people's work); date of publication(may be out dated unless considered a seminal piece of work)(Burton,2000); the abstract or author's summary; the introductory paragraphs or chapter(should set the scope of the paper; graphs, tables etc which summarise key findings; section or chapter headings which indicate the thread of the argument;

concluding paragraphs or chapter(should summarise the key issues and give pointers for future work) (Gash,1989 cited by Burton, 2000).

If you decide that it is useful to read then as you read you need to judge if the source updates i.e. just adds to your existing knowledge of the literature or whether it raises new issues.

Your literature review must demonstrate both analysis and synthesis. When you read new source –*analyse* – look closely at it, break it into its constituent parts and see how one part relates to another. Locate it within your existing knowledge and bring it together with previous knowledge to *synthesise* a new and enhanced understanding of ideas and concepts important to your study.

When you consider the body of literature, a similar process should occur– *analyse* the constituent parts, concepts, theories; and decide how they interrelate to each other. Critically reflect on its completeness, coherence and consistency. Synthesise what you learnt by identifying the connections between different parts of the literature; identify convergence and divergence between methods, findings and theories (Punch,2009).

Table 2 (Thompson ,1996 cited in Blaxter et al, 2006p. 116) outlines a very helpful process for analysing and evaluating an argument.

1. Identify conclusions and reasons. Look for ‘conclusion indicators’ words such as ‘therefore’, ‘so’, ‘hence’, ‘thus’, ‘should’; look for ‘reason indicators’ [‘because’, ‘for’, ‘since’, ‘and/or’. · Ask ‘What is the passage trying to get me to accept or believe?’ · Ask ‘ What reasons, evidence is it using in order to get me to believe this?’
2. Identify unstated assumptions: · Assumptions supporting basic reasons · Assumptions functioning as additional reasons · Assumptions functioning as intermediate conclusions · Assumptions concerning the meaning of words · Assumptions about analogous or comparable situations · Assumptions concerning the appropriateness of a given explanation
3. Evaluate truth of reasons/ assumptions: how would you seek further information to help you do this?
4. Assess reliability of any authorities on whom the reasoning depends.
5. Is there any additional information which strengthens or weakens the conclusion? Anything

which may be true? Anything you know to be true?
6. Assess the plausibility of any explanation you have identified.
7. Assess the appropriateness of any comparisons that you have identified.
8. Can you draw any conclusions from the passage. If so, do they suggest that the reasoning in the passage is faulty?
9. Is the reasoning in the passage parallel with reasoning which you know to be faulty?
10. Do any of the reasons or assumptions embody a general principle? If so, evaluate it.
11. Is the conclusion well supported by the reasoning? If not, can you state the way in which the move from reasons to conclusion is flawed? Use your answers to questions 5 to 10 to help you do this

Table 2 Analysing and Evaluating an Argument (Source: Thompson(1996) cited by Blaxter et al, 2006 p. 116)

A mind map or storyboard of the emerging literature might help to identify key themes and the relationship, or lack of continuity, between them. As your knowledge and review accumulates you should develop an organising framework, often based on the key themes and sub-themes related to your thesis, to help you to manage the information (Punch,2009). These then are likely to form the basis of the sections and sub-sections in the eventual written review. Punch (ibid.) suggests that these are then linked together by inter-connecting summaries.

Store, manage and retrieve relevant information

The system for storing and managing your literature search can be manual paper based, most convenient are using file cards. They can be re-sorted and re-classified as your search develops; they are easy to handle, and they are tougher than paper notes (Burton,2000). Alternatively you can utilise a computer software package. Advantages and disadvantages of using a computer:

Advantages	Disadvantages
Computers are good at handling large databases. If for some reason you think you will have many references it could be a good strategy	Computer records require access to a computer, and are therefore not as flexible as manual systems.
Computer records can be manipulated in a more sophisticated way than manual records,	Computer files could generate more work. First, noting the reference manually then

e.g. undertaking key word searches.	transferring it to a computer database.
Once the references have been put on disk then they can be moved across to another file and used in your bibliography.	The searcher is dependent on printouts to search for duplicate references. The need to review printouts is a chore.
If most of the literature searches are on-line searches, then information can be downloaded and stored in an appropriate file.	It is difficult to browse looking at a computer with only one record being shown at a time.
	For some reason the system might lose data hence the need for backups.

Table 3 Evaluation of computer storage methods (Source : Burton,2000 p.146).

What information should be recorded?

At a minimum you should record the complete bibliographic reference(very important as it will be very time consuming to have to revisit this again later); where it was found; location and availability; the date accessed particularly if is a web source; whether you have read the item; an annotation or abstract.

A cataloguing system can be a good idea with headings appropriate to your research– e.g. author, title, methods, key findings. In this way if you can assign headings to a paper and later retrieve it by searching a particular heading.

If is a useful item you will want to make notes of the content, avoid copying large chunks of text–summarise in your own words–this will enable you to absorb these ideas into your own thinking and project schema, it also helps to avoid plagiarism.

The *SQ3R* system is one method for more detailed note-taking and processing:

Survey– quick read through to screen for relevance

Question– think about what it was about; make a note of critical / evaluative questions

Re-read–read through it actively and carefully; to note key ideas and answer your questions

Record–take notes under main key headings; summarise major arguments

Review– an opportunity to ‘fine tune’ the knowledge and understanding that you have gained and noted.

Writing your literature review

The process of writing your literature review has three main parts—developing a structure (section and sub-section headings), writing a first draft, revising and re-writing further and final drafts.

The literature review should tell a story with a beginning, middle and end; with connections made as relevant between one part and another (Thomas, 2009). You introduce the key issues of the field at the beginning; you deepen and develop this discussion using analysis and synthesis in the middle; you summarise the issues, differences, dilemmas and questions that are unresolved at the end. The concluding section should be completed by demonstrating how, in the context of present knowledge, answering your research questions will make a new and original contribution to the field. You must always remember that the review is providing the theoretical and conceptual underpinning for your thesis, and so throughout the review you should seek opportunities to demonstrate how it provides the substantive and methodological rationalisation for your work.

Your review must be critical not merely descriptive. Punch cites Wallace and Poulson (2003)'s definition of being critical:

- Adopting an attitude of scepticism or reasoned doubt;
- Habitually questioning the quality of claims to knowledge;
- Scrutinizing claims to see how far they are convincing;
- Respecting others as people at all times;
- Being open minded;
- Being constructive. (Punch, 2009 p.104)

Your skill with words will play an important role in making links between sources that agree, studies where there are differences and contrasts; and building a narrative that shows how the field has developed. Thomas (2009) provides a useful list of linking words and this is reproduced in Table 4.

When there is a difference	When there is agreement	When one idea leads to another
however; but; notwithstanding this; although; yet; conversely; in spite of this; nevertheless; on the other hand; despite; then again.	moreover; further ; furthermore; additionally; likewise; also; similarly; equally; and; what is more	Hence; because of this; thus; as a result; consequently; therefore; accordingly; so; for this reason; this is why

Table 4: Useful link words (from Thomas, 2009, p.39)

Direct quotations should only be included if you have thought through their purpose and relevance to your thesis—you should not include large chunks of other people's

words and most reference to the ideas of others should be paraphrased, and demonstrate the relevance to your study. Levin (2005) provides some handy hints when deciding when and how to use a reference/quotation appropriately, and these have been summarised and adapted in Table 5.

Type of contribution made by the quotation to your review	How to refer to it in your review	Questions to ask about its role in your review
Fact	X found, discovered, ascertained, points out that...	Is this fact universally accepted? Accurate (as far as you can tell)? Have other significant facts been ignored? How am I using this fact?
Perception	X describes, identifies, distinguishes, categorises; as X sees it...	Does X have a particular bias? Are there alternative standpoints?
Figure of speech	X regards...as; compares...to; suggests that...is like...	Is this an appropriate metaphor or simile? How does it assist my understanding? Do I want to adopt it?
Definition	X defines... to mean...	Do other writers have other definitions?
Assumption	X assumes, postulates, hypothesise, conjectures, takes it for granted that...	Do other writers make this assumption? Is it valid, justified? Do I wish to share it? If I make different assumptions would I come to different conclusions?
Proposition	X argues, asserts, contends, suggests, hypothesises ...that if A, then B; X supports, is critical of, criticises...	How can I test the validity of this proposition, whether it 'fits the facts'?
Opinion	According to X; X tells us, says, considers, comments, agrees that...; X disagrees with...; in X's opinion...; it seems to X that...	On what evidence is this opinion based? Do other people agree with this opinion? If not, why not? Do I agree with X?
Value judgement	To X, it should, ought...; to X it is good, bad, harmful...	Do other people share these value judgements? Why should I pay attention to them/
Claim	X claims that...; in X's professional judgement...	What is the authority on which X bases his/her claims? Why shouldn't I challenge that claim and authority?

Question	X asks/questions whether...	Are these questions relevant? Are there other questions that I ought to be asking?
Reasoning	X infers from this evidence that...;shows from his/her analysis that...;X concludes that...	Is this reasoning sound? Could other conclusions be drawn from the same evidence?

Table 5: Deciding when a reference/quotation is useful and appropriate (Adapted from Levin, 2005 p.78–9)

There are different systems that can be used for referencing e.g. variants of the Harvard System, Endnotes etc. Schools within the University may have different preferences. You should consult with your supervisors about the system that you should adopt and familiarise yourself with it carefully. An example of the system adopted by one School – the School of Social Justice and Inclusion – is provided in a handbook that can be found in the Further Reading and Resources Section of the module.

References

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