What is a literature review?

Students are often unsure of how to write a literature review. This is usually because, unlike other stages of a thesis such as Methods and Results, they have never written a literature review before.

FAQs about literature reviews

In the table below, you will find some of the questions that students ask, and some suggested answers.

<table>
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<th>QUESTIONS</th>
<th>SAMPLE ANSWERS</th>
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<tbody>
<tr>
<td>What is it?</td>
<td>An evaluation of previous research on your topic</td>
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</table>
| What is its purpose?      | 1. "provides background information needed to understand your study  
2. assures your readers that you are familiar with the important research that has been carried out in your area  
3. establishes your study as one link in a chain of research that is developing and enlarging knowledge in your field" (Weissberg & Buker 1990, p.41) |
| What do I need to include?| Minimum: well-established research in the field; most recent relevant research.                                                                  |
| How do I organise it?     | Some POSSIBLE approaches, which can be combined (there are others):  
1. Organised around key themes or debates  
2. From distant to close; from less specific to more specific  
3. Generic knowledge  
   - conceptual framework  
   - understanding of specific context  
   - applying theory to context  
4. A methodological approach, following the different methods used in your field. |
| What referencing system should I use? | The REFERENCE system you follow will be that of one of the leading journals in your field: check with your supervisor. |
How do I refer to other authors?

How you refer to authors will depend on whether you want to focus:

- on the information: use name/number in parentheses. e.g.: It was demonstrated [2] or It was demonstrated (Williams, 2003)
- or on the author: use acknowledging phrases e.g. Williams (2003) demonstrated that... or Williams [2] demonstrated that...

How long should it be?

How long is a piece of string? Unless your School specifies the length, you can use the following as a rough guide:

Around 15-30% of the whole thesis (see FAQs)

OR

Your thesis is expected to be 60% your own work. If your literature review is more than 40% of your thesis, it’s probably too long.

What am I supposed to DO in my literature review?

You’re expected to show that:

1. you can recognise the relevant and important research in your field
2. you can understand this research, by organising and evaluating it
3. you can see where there is a gap in the research which your study will attempt to fill

Examples of literature reviews: organisation

Here you will find some examples from past Honours theses. The first set of examples shows part of the Table of Contents, so that you can see the kind of information included in a literature review. What can you notice about how the students have organised their reviews?

Example A

From the School of Biotechnology and Biomolecular Sciences

1. INTRODUCTION ........................................... 1

1.1 HEPATITIS C VIRUS................................. 1

1.1.1 Genome ............................................. 1
1.1.2 Pathogenesis...................................... 2
1.1.3 Transmission................................. 3
1.1.4 Epidemiology................................. 5
1.1.5 Treatment................................. 5

1.2 QUASISPECIES................................. 7

1.2.1 Quasispecies and Treatment Outcome...... 7

1.3 METHODS TO ANALYSE QUASISPECIES........ 8

1.3.1 Cloning and Sequencing........................ 9
1.3.2 Heteroduplex Mobility Analysis (HMA)....... 9
1.3.3 Capillary Electrophoresis...................... 11

1.4 HYPOTHESIS AND AIMS ...................... 11
Question
What organisational approach has the student taken in example A?

Example B
From the School of Photovoltaic and Renewable Energy Engineering

2. LITERATURE REVIEW .......................................... 2-1
   2.1 CLASSIC DIFFUSION CONCEPT ....................... 2-1
      2.1.1 diffusion mechanisms ............................. 2-1
      2.1.2 Fick’s law .............................................. 2-4
   2.2 BORON DIFFUSION ........................................ 2-9
      2.2.1 diffusivity ............................................ 2-9
      2.2.2 segregation coefficient ............................ 2-10
      2.2.3 silicon self-interstitial and diffusion rate...... 2-12
      2.2.4 formation of boron rich layer (brl)............. 2-12
      2.2.5 boron diffusion systems ............................ 2-14
   2.3 BORON NITRIDE SOLID SOURCE DIFFUSION..... 2-15
      2.3.1 benefits and challenges ............................ 2-15
      2.3.2 diffusion process ..................................... 2-16
   2.4 SOLAR CELL CHARACTERISATION ........................ 2-18

Question
What organisational approach has the student taken in example B?

Examples of literature reviews: language
Here you will find some more examples of literature reviews, showing how the students refer to and comment on previous research. Look at the following examples and see how the students summarise a number of studies and contrast differing findings. Also notice the use of evaluative language to show the student’s evaluation of the previous research.

Key
- Summarising language
- Contrast language
- Evaluative language

Example C
“Several studies [5, 6, 7] have reported the benefits of using boron solid sources over other types of boron diffusion...”
source. ... On the contrary, Warabisako et al [9] demonstrated that obtaining high efficiencies with boron solid source was no easy task. They reported severe degradation of bulk minority carrier lifetime after boron solid source diffusion” (Chen, 2003, pp.2-14-2-15).

Example D

"On evaluation of the studies performed thus far, genotype 1b RdRp proteins have been studied extensively while RdRp proteins from other genotypes have been somewhat ignored. Kim et al. was the only group to have published a 3a RdRp paper, although their focus was on the template requirement for the NS5B gene as opposed to polymerase activity” (Tan, 2004, pp.15-16)

See next: Exercise for getting started on your literature review