Aviation Research Project: literature review

What is a literature review?

Literature = scholarly publications which have been written on a particular topic, such as journal articles, research reports, government reports and text books.

The review = the careful selection of literature relevant to your topic and the presentation, interpretation, classification and evaluation of this literature.

Why do a literature review?

Your literature review becomes an essential link in your research project:

- The literature review provides the reader with all the important background information needed to understand your project.
- It places your project as one link in a chain of research that is developing knowledge in your field.
  - To understand where you are going, it is important to understand what came before you.
- It demonstrates to the reader that you are aware of up-to-date and important knowledge on your topic.
- It may also be used to justify or provide a rationale for your research question, your research framework or your methodology.

A literature review is NOT ...

- An annotated bibliography
  - In an annotated bibliography the writer presents a summary and critical evaluation of each article or scholarly resource, one by one.
  - There is little or no connection made between the various articles or resources.

- An essay
  - Essays and literature reviews have very different purposes and require different approaches.
  - In an essay a student is given a topic to discuss or a question to answer and the writing is organised around responding to that topic or question.
  - The essay progresses in a linear way, where the student presents his/her first point, followed by an explanation which is supported by the literature.
  - The student then moves on to the second point and so on.
  - So in an essay the literature has a supporting role, whereas in a literature review it is the literature itself which is the subject of discussion.
In the literature you **WILL NOT** ...
- answer a question

In the literature you **WILL** ...
- identify a gap in existing knowledge, that is, you will identify what we still need to know about this topic or issue
- **POSE** a question related to this gap. This will be your research question.
- compare and contrast different authors’ views on an issue
- note areas in which authors are in disagreement
- highlight gaps
- or identify any particular shortcomings of past research

In this way your literature review becomes a critical discussion of the knowledge or ideas related to your research topic

**Structure of the literature review**
The body of your literature review will be organised in way that best suits your topic
- **Historically/chronologically** - if you are looking at the evolution of a concept or practice overtime or evaluating whether a concept from 20 years ago holds up today, then a historical or chronological organization might be appropriate.
- **Research questions** - some writers organise their literature review around the research questions.
- **Themes** - a very common way to organise the literature is according to key themes which emerge from the literature in relation to your topic

**Organising your literature**
You must demonstrate that you went about your literature review in a systematic and rigorous way. You can include diagrams or tables to show how you have organised your literature.

**Example 1**
- The writer created a map of ideas or themes and indicated their relative importance.
- Given the relative size of stress and mental workload to the other themes, we can see that they are more prominent in the literature.
- Also notice how the writer has connected these themes to others and used the line width to communicate the relative strengths of the relationship between the different themes.
- The subsequent literature review will be then organised according to these key themes.
Example 2:

- The writer has summarised the large amount of literature on the topic into a table.
- The writer categorised the literature related to organisational culture and safety according key work areas.
- The writer further organized the literature according to three forms of human activity that occur in hazardous environments.
- This table allowed the writer to identify areas the literature has focused on, and any gaps. Also, it allowed the writer to examine similarities and differences in the literature.
- Further, the table provided a structure for the presentation of the literature review.

Table 1: Organisational culture and safety

<table>
<thead>
<tr>
<th></th>
<th>Normal conditions</th>
<th>Emergency conditions</th>
<th>Maintenance-related activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air traffic control</td>
<td>Green 2006</td>
<td>Swift 2006; 2007</td>
<td>Jones &amp; Brown 2005</td>
</tr>
</tbody>
</table>

Figure 1: Frequencies of research articles relating to factor interactions (Edwards et al. 2012)
A brief introduction:

- The length will depend on the word requirement for your research project report or paper. It could be just a couple of sentences or it could be several paragraphs.
- Inform the reader of the purpose or focus of the section and sign post to the reader what is coming up in this section.
- You may want to also inform the reader of how you went about the process of conducting the literature review so that the reader can be assured of the rigor of your process.

The body sections:

- Lead the reader through your various ideas and understandings.
- Have clear sections and subsections to your literature review.
- Ensure that each paragraph has one clear idea.
- Use sign posting, transitioning and linking language to connect ideas and to move from one paragraph to the next.

Sample body section:

There is no universally agreed-upon definition of organizational culture. Many prominent authors in the field create their own (Reason 1997). According to Deal and Kennedy (1982, p. 6) organisational culture is ‘the way we do things around here’, whereas Peters and Waterman (1982, p. 6) contend it is ‘a dominant and coherent set of shared values conveyed by such symbolic means as stories, legends, slogans, anecdotes and fairy tales’. However, there are three common themes found in every definition: 1) all authors agree that individuals in an organisation have a set of common values; 2) these values are typically taken for granted by the leadership; and 3) there is a symbolic way the values are communicated through an organisation (Moorhead & Griffin 1992).

The literature provides numerous examples of how organisations communicate their values. The most common ...

(Adapted from Hernandez 2001, pp. 5-6)
Concluding your literature review:
- Summarise the main focus of the literature review.
- Highlight the gap in the literature.
- Make a connection between your literature review and your research questions.

Sample conclusion:

<table>
<thead>
<tr>
<th>The review of the literature has revealed</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>that while culture is inextricably linked to aviation safety in Australian Defence Forces, the attitudes of personnel are a fundamental component. It is also clear that safety culture is an inadequate and underdeveloped concept despite the popularity of the term. To date, however, the link between attitudinal dimensions and organisational (behavioural) measures remains relatively unexplored. Therefore this research aims to examine the attitudes of ADF aviation professionals that may influence the safe performance of ADF aviation operations.</td>
<td>Gap</td>
</tr>
</tbody>
</table>

OR

<table>
<thead>
<tr>
<th>Therefore this research aims to examine the following research question:</th>
<th>Link to research questions (written in question form)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• What are the attitudes of ADF aviation professionals that may influence the safe performance of ADF aviation operations?</td>
<td></td>
</tr>
</tbody>
</table>

(Adapted from Falconer 2006, p. 94)

Grammar

Your job as the writer is to explore past research and ideas and theories related to your topic and then present your interpretations or evaluations of this literature. One way in which we situate research, ideas and theories is through the use of grammar.

<table>
<thead>
<tr>
<th>Verb tense</th>
<th>Purpose/function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple present tense</td>
<td>used when talking about an idea or theory that is constant</td>
</tr>
<tr>
<td>Simple past tense</td>
<td>to describe actions or events in the past that are completed</td>
</tr>
<tr>
<td>Present perfect tense</td>
<td>to describe actions or events in the past that are connected to the present</td>
</tr>
<tr>
<td>Passive voice</td>
<td>to focus on the action, rather than the person doing the action</td>
</tr>
</tbody>
</table>
Example of grammar:

<table>
<thead>
<tr>
<th>Simple present</th>
<th>Present perfect</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>are</em> deadly occurrences and <em>have been investigated</em> by a number of researchers. According to one study, in nearly two thirds of vehicle fire deaths, the swift advance of fire and the ensuing incapacitation of passengers <em>were</em> contributing factors (United States Fire Administration 2002). In a full scale vehicle test, the engine compartments <em>took</em> between 10 to 25 minutes to reach full involvement (Tewarson, Quintiere &amp; Purser 2007; Santrock n.d.). Once the engine compartment <em>was</em> fully involved, flames <em>spread</em> into the passenger compartment in as little as one to six minutes, resulting in occupant death in 1 to 3 minutes due to the coinciding effects of heat, burns, and toxic gases (Tewarson, Quintiere &amp; Purser 2007). These results should <em>be considered</em> in relation to emergency response times. For example, in rural accidents, it could take more than half an hour before an emergency response team <em>arrives</em> (Bahouth 2004).</td>
<td></td>
</tr>
<tr>
<td>Simple past</td>
<td>Simple present</td>
</tr>
</tbody>
</table>

(Adapted from Patronik 2008)

References


Patronik, EA 2008, *An analysis of vehicle fires and potential methods to reduce their severity through more stringent material standards*, ProQuest, UMI Dissertations Publishing.