



Thesis writing



UNIVERSITY
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AUSTRALIA

Materials & Methods

PURPOSE

A methods chapter in a thesis tells readers 'how' the research was carried out to answer a research question. In the traditional thesis structure, this explanation is usually presented in a separate chapter. However long or short, the Methods section functions to explain:

- WHEN the study was carried out
- WHERE the study was carried out
- WHAT materials, techniques, samples, data, approaches, theoretical frameworks were used in the study
- HOW the study was carried out
- WHAT procedures were used.

These last two points might include issues such as the statistics that were used to analyse data.

The methods section is extremely important in Science and Engineering disciplines, where a procedure may need to be replicated by others to verify results, or to slightly modify parameters to achieve different results, all of which depends on very detailed description of the methods used in a particular project. Detailed description of various methods and their results can also be given as part of the rationale for choosing a particular method of experimentation, for example, when preliminary trials and errors in using particular methods leads to the final design of the research. If the methodology is cumulative (builds up through trial and error), there will likely be some discussion of the problems encountered in earlier methods within the chapter dealing with methodology. If the methodology is relatively straightforward, with few deviations from the original design, any problems encountered using the chosen methodology will be discussed in the Discussion section/chapter.

In a thesis structure where the methodology is less critical (does not need to be reproduced) for the whole thesis to make sense and be accepted (eg in theses based on theoretical analysis rather than experiment), the methodology used might be described within the general introduction, rather than as a separate chapter (see the example introduction from Education).

