The required structure of a scientific study

1 Introduction

The introduction first contains a brief general introduction to the subject matter (defines the area of the thesis, states the motivation, etc.). The general introduction is intended to be a very short part of the whole thesis.

1.1 Overview of the state of the art

The overview of the current state of the problem to be addressed summarizes in detail (1) the current state of knowledge and the initial conditions for the problem solution and (2) defines the problem to be and will be addressed in the thesis. This part of the thesis is mainly created based on a research using many literature sources. The interpretation proceeds from general information to information that is as specific as possible, and from what is known about the problem to what is unknown and currently appropriate to solve.

The chapter Overview of the state of the art must conclude with a summary of all the information presented, an analysis of its context and, on this basis, a formulation of the state of the art already in relation to the topic and content of the dissertation. The objectives of the dissertation, as set out below, must then logically follow from this conclusion.

Depending on the scope, this part of the introduction can be divided into subchapters, but this is not necessary.

1.2 Objectives of the work

Here the stated objectives of your dissertation should be succinctly described, based not only on the assignment, but mainly on the conclusion made in the previous chapter Overview of the current state of the art.

In contrast to the very brief assignment of the thesis, the objectives in this section need to be specified in more detail and it is necessary to divide these objectives into sub-objectives. For these, it is appropriate to indicate the form of implementation (e.g. whether it is planned to organise a clinical study focusing on XXX, a laboratory experiment investigating XXX, etc.).

2 Methods

The chapter contains a detailed description of the method and results to date of the student's solution of the stated objectives. Depending on the nature of the problem to be

solved, this part of the thesis can be divided into several chapters, where the chapter titles are chosen more specifically with respect to their content and the objectives or sub-objectives to be addressed.

The procedures applied to achieve the results of the work are described, as well as the instruments and materials used, methods of data processing and statistical evaluation, etc. In the case of measurements with living subjects, this part of the thesis includes information on how ethical issues of the research were treated and the characterisation of the subjects according to the practices in biomedical journals.

3 Results

Dedicate this chapter to presenting the results clearly, not to discussing them. Present the data mainly in graphs and tables.

The results should always include a main text that places the figures and tables presented in the context of the preceding text and guides the reader through the data presented.

4 Discussion

In this section, summarise the results obtained (the main findings of the thesis is that...) and then interpret these results with respect to the objectives of the thesis. The results and outcomes obtained should also be confronted with those of other authors, products of other companies, etc. Correct citation of sources (quotations of the works compared and discussed) is essential. The limitations of the research methodology and results are also discussed.

At the end of the discussion, it is necessary to summarise and indicate the degree of completion or work in progress of the dissertation, to summarise the results achieved and, conversely, to specify what work has not yet been carried out, whether new facts have emerged that need to be addressed in the research before the dissertation is completed, etc.

5 Further progress in the dissertation

In this paragraph, describe in detail the future direction of the thesis in sub-steps. The individual points must be based on the summary of the dissertation development given at the end of the previous chapter.

6 Conclusion