

How to write an abstract?

A short definition:

“An abstract is a summary (resume) of a project or research which usually stands under the main title.”

It gives the reader a brief but straight to the point overview what the project or research is about.

An abstract should contain the same main contents as the research (except it DOES NOT include the reason for choosing the subject of doing the project).

Therefore, an abstract includes:

- 1) **Introduction** which is a brief description of method/problem area covered. This should include, according to the type of project, a definition or main aim, clear separation from other areas which you have decided are not relevant. This can sometimes include the main theory and method you are using.
- 2) **Main points and results** of the project (selection of the most important points only).
- 3) (If it is important) **why and how you chose these main points**, solutions, recommendations for action.
- 4) **Recommendations for future actions**, or future **consequences**.

How to write an abstract in detail?

Where to start? After you have finished your project/report/case, re-read it and underline key points and key words.

Make a structure for an abstract based on the above, arranging the key words and notes on them in each section.

Write the abstract based on your structure, keywords and notes. The result you should aim for is well stated in the phrases *“Reduce to the maximum.”*. This means you should put in the maximum information in the shortest way possible.

Grammar and style

Simple abstracts can be between 100 up to 400 words (300 words is the average): keep it short with uncomplicated sentences, not long ones. In the most abstracts HEADINGS are NOT needed, but in longer ones you can use them to mark the main sections. Keep sentences simple and clear.

- Simple grammar in the SIMPLE PRESENT and SIMPLE PAST tenses. **Do not** use the continuous **“ing”** form. Most of it is in the present but methods used, and sometimes what you have found out, are expressed in the simple past (+ed). Historical abstracts are for the main part in the simple past.
- Keep it formal – **do not** use “I” or “we” – to avoid this you can use the passive to describe processes, e.g. “which was designed for ease of installation”; “a problem was found in the oil

cooler"; "handovers have been shortened to allow quicker installation"; "a problem was detected in the oil cooler"; "signals were discovered when the engine turned on". NOTE that the passive in English is different from Danish – it is simpler – "It is designed" = CORRECT, NOT "~~there is designed~~" or "~~it gets designed~~".

- Do not describe things as they happened or in the order you did them, except in giving a historical abstract. Abstracts are for telling people the main points and results, not precisely how you got there, what you did, or could have done.
- If writing conclusions, achievements and present time results/consequences of your project, you can use the simple present or present perfect, e.g. "So there have been many changes in the procedure, namely ...".
- It is important to use **keywords** from the main project, so people can judge if the project is relevant, and should be read.
- Finally, it is not normal to put references in abstracts, except if your work is based on a text book or important theory.

An example of an abstract

Title

The effect of waves on engine-propeller dynamics and propulsion performance of ships

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Abstract

This paper investigates the effect of waves on the propulsion system of a ship. In order to study the propulsion in different wave conditions, a procedure for wake estimation in waves has been implemented. A clear drop in the propulsion performance was observed in waves when engine propeller dynamics, wake variation and thrust and torque losses were taken into account. This can explain the drop in vessel performance often experienced in presence of waves in addition to the effect of added resistance. Therefore, performance prediction of ships in rough weather can be improved if the effects of waves on the propulsion system are considered. Specific problems causing drop in performance have also been identified. System response in case of extreme events like propeller emergence has been simulated for analyzing the performance and safety of the propulsion system. The framework of engine-propeller coupling demonstrated in this paper can also be used to analyze different components of propulsion system (e.g. propeller shaft, control system) in higher detail with realistic inputs. This paper is a step towards optimizing the propulsion of ships for realistic operating conditions rather than calm water condition for energy efficient and economic ships.