




Language Center

Writing up Research

The Abstract

This page is designed to be interactive, so in places you can jump forward for more information, or will be

asked questions that you find answers to by using the links. Simply click on the link, then use  to return to where you were. This page covers:

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PURPOSE

For conference papers, research papers, theses and dissertations, you will almost always be asked to write an abstract. The main point to remember is that it must be short, because it should give a summary of your research. In fact, not only are abstracts short, they must almost always be a certain, specified length. Many abstracts are, so, before you begin writing, you must find out how long your abstract should be (for example, [200 words for AIT master's theses](#)) and you should come close to - but not go over - this limit. Abstracts that exceed the maximum word limit are often rejected because they cannot be used for databases, summaries of conferences, etc.


An abstract should briefly:

-  Re-establish the topic of the research.
-  Give the research problem and/or main objective of the research (this usually comes first).
-  Indicate the methodology used.
-  Present the main findings.
-  Present the main conclusions

It is essential that your abstract includes all the keywords of your research, as it will be enabled on databases which other researchers will search. Obviously if you only have two hundred words, you can only cover each of these areas briefly. The emphasis is generally on the main findings and main conclusions since these areas are of most interest to readers.



COMMON PROBLEMS

- ☐ **Too long.** If your abstract is too long, it may be rejected - abstracts are entered on databases, and those is usually a specified maximum number of words. Abstracts are often too long because people forget to count their words (remember that you can use your word processing program to do this) and make their abstracts too detailed (see below).
 - ☐ **Too much detail.** Abstracts that are too long often have unnecessary details. The abstract is not the place for detailed explanations of methodology or for details about the context of your research problem because you simply do not have the space to present anything but the main points of your research.
 - ☐ **Too short.** Shorter is not necessarily better. If your word limit is 200 but you only write 95 words, you probably have not written in sufficient detail. You should review your abstract and see where you could usefully give more explanation - remember that in many cases readers decide whether to read the rest of your research from looking at the abstract. Many writers do not give sufficient information about their findings
 - ☐ **Failure to include important information.** You need to be careful to cover the points listed above. Often people do not cover all of them because they spend too long explaining, for example, the methodology and then do not have enough space to present their conclusion.
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ABSTRACTS AND INTRODUCTIONS COMPARED

At first glance, it might seem that the introduction and the abstract are very similar because they both present the research problem and objectives as well as briefly reviewing methodology, main findings and main conclusions. However, there are important differences between the two:

Introduction

- ☐ Should be short, but does not have a word limit;
- ☐ Main purpose is to introduce the research by presenting its context or background. Introductions usually go from general to specific, introducing the research problem and how it will be investigated). For more detail see [Introductions](#).

Abstract

- ☐ Has a maximum word limit;
 - ☐ Is a summary of the whole research;
 - ☐ Main purpose is to summarize the research (particularly the objective and the main finding/ conclusion), NOT to introduce the research area.
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EXAMPLES

Example 1

Here is an abstract from a published paper. It is 220 words long. Read it through looking for the main purpose of each sentence (for example, presenting research problem, objective, methodology, main findings, or conclusion). You can find suggested answers by clicking on the sentences.

Abstract

Major problems of the arid region are transportation of agricultural products and losses due to spoilage of the products, especially in summer. This work presents the performance of a solar drying system consisting of an air heater and a dryer chamber connected to a greenhouse. The drying system is designed to dry a variety of agricultural products. The effect of air mass flow rate on the drying process is studied. Composite pebbles, which are constructed from cement and sand, are used to store energy for night operation. The pebbles are placed at the bottom of the drying chamber and are charged during the drying process itself. A separate test is done using a simulator, a packed bed storage unit, to find the thermal characteristics of the pebbles during charging and discharging modes with time. Accordingly, the packed bed is analyzed using a heat transfer model with finite difference technique described before and during the charging and discharging processes. Graphs are presented that depict the thermal characteristics and performance of the pebble beds and the drying patterns of different agricultural products. The results show that the amount of energy stored in the pebbles depends on the air mass flow rate, the inlet air temperature, and the properties of the storage materials. The composite pebbles can be used efficiently as storing media.

Helwa, N. H. and Abdel Rehim, Z. S. (1997). Experimental Study of the Performance of Solar Dryers with Pebble Beds. *Energy Sources*, 19, 579-591.



Example 2

Here is a second abstract from a published paper. It is 162 words long. Again, read it through looking for the main purpose of each sentence (for example, presenting the research problem, objective, methodology, main finding, or conclusion). You can find suggested answers by clicking on the sentences.

Abstract

The long-term performance of various systems was determined and the economic aspects of solar hot water production were investigated in this work. The effect of the collector inclination angle, collector area and storage volume was examined for all systems, and various climatic conditions and their payback period was calculated. It was found that the collector inclination angle does not have a significant effect on system performance. Large collector areas have a diminishing effect on the system's overall efficiency. The increase in storage volume has a detrimental effect for small daily load volumes, but a beneficial one when there is a large daily consumption. Solar energy was found to be truly competitive when the conventional fuel being substituted is electricity, and it should not replace diesel oil on pure economic grounds. Large

daily load volumes and large collector areas are in general associated with shorter payback periods. Overall, the systems are oversized and are economically suitable for large daily hot water load volumes.

Haralambopoulos, D., Paparsenost, G. F., and Kovras, H. (1997) Assessing the Economic Aspects of Solar Hot Water Production in Greece. *Renewable Energy*, 11, 153-167.



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