

# What is an abstract and how to build one

Paul W. L. Lai Copyright 2011

## 1. What is an abstract?

### 1.1. *Abstract is a succinct summary of your research*

Abstract is the most important part of your academic paper. It is a *succinct summary* of the research presented by your paper, and it basically functions to advertise the research to as many readers as possible in the big wild world. Whether or not the readers are interested in reading the details of your paper purely depends on the quality of the paper's abstract.

If the quality of your abstract is good, it will be able to provide a clear and convincing summary of your research. In particular, it will be able to inform the readers (i) what your research is basically about, (ii) why your research was carried out, (iii) how your research was carried out, and (iv) what you have concluded based on the research.

If the quality of your abstract is not good enough, which means that the abstract fails to include any of the four components just mentioned, then it will not be able to provide a clear and convincing summary of your research, and as a result, there might be not enough incentives for the readers to proceed to read the details of your research.

### 1.2. *Abstract is written in only one paragraph*

Since abstract is a succinct summary of your research, its length should not be very long. Normally, it is written in only one paragraph. The number of words in an abstract normally ranges from 150 to 200 in a typical science paper, and from 200 to 300 in a typical humanities paper.

### 1.3. *Things to be included in an abstract*

A high quality abstract, regardless of whether it is written for a science paper or humanities paper, should include at least the following four components:

**(1) *Main task of your research:*** This is to let the readers know the central focus of your research, or *what* your research is basically about. For example, the main task of your research could be an *investigation* of a particular psychological phenomenon, or an *analysis* of a particular scientific theory, etc. No matter what the main task is, make sure that it can be clearly understood by the readers, and the readers can know exactly what to expect as a result. The biggest mistake in summarizing your research is to use the phrases like "such and such will be discussed", or "so and so will be considered", etc., without letting the readers know what to expect as a result. Note that abstract is not a place for waffling. It should report exactly what you did in the research.

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***(2) Background information / motivation leading to your research:*** This is to let the readers know *why* you carried out the research. For example, the reason could be due to an inadequate explanation given by some previous research concerning a particular psychological phenomenon (e.g. paying attention to something), or a problem found in the existing scientific theory (e.g. Hawking's Black Hole theory) in predicting the outcome of an unprecedented case. Whatever the background or motivation is, make sure that it demonstrates a continuity between your research and the previous researches, and it highlights the necessity for carrying out your research. The biggest mistake is to write about some previous researches that do not bear any direct relation to your present research. Note that abstract is not a place to show off how much you know about the previous researches. It should highlight the necessity for your research.

***(3) Methodology and results:*** This is to let the readers know *how* exactly you carried out your research. For example, the investigation you carried out to shed new light on a particular psychological phenomenon could be composed of two experiments and a comparison study of the experimental results obtained. Whatever your methodology is, make sure that it includes the result produced by each of the methods you used to implement the research task, and most importantly, it should demonstrate a logical relation among the results produced. Note that the research tasks you carried out through the chosen methods are the premises for inferring the conclusion of your research. Whether or not the readers find the basic structure of your research convincing purely depends on how well you organize the methodology in your abstract. The biggest mistake here is to write something that bears no inferential relation to the conclusion of your research.

***(4) Conclusion / thesis statement:*** This is to let the readers know what you have concluded based on the results of all the necessary tasks carried out in your research. For example, the conclusion could be that you have derived a new way of understanding the particular psychological phenomenon based on the new results obtained from the experiments that you conducted. Whatever the conclusion is, make sure that it is clear, and most importantly, it bears an inferential relation to the research results you obtained. The biggest mistake here is over generalizing the conclusion you drew. Here is

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a simple example of over generalization<sup>1</sup>: “I once saw a corporation lawyer get into a really nice car and drive off. Therefore all corporation lawyers are really wealthy.”

## 1.4. Things not to be included in an abstract

It is important to exclude the information that is not necessary for understanding the main argument of your research. Unless they are absolutely essential to understanding the main idea or research results of your research, you should avoid using the following in your abstract:

- (i) *bibliographic references*
- (ii) *footnotes*
- (iii) *citations or quotations (paraphrase instead)*
- (iv) *abbreviations, symbols, etc (spell out all terms)*

## 2. How to build an abstract: Practical Steps

**Step 1:** Please answer the following question in one sentence.

*What is the **main task** of your research?*

You may answer the question by beginning with “*In this study/research, we analyzed ...*”

**Step 2:** Please answer the following question in one sentence.

*What is the **motivation** for carrying out your research (e.g. (i) background information and (ii) some unsolved problem in the field of your research)?*

You may answer the question by beginning with “*Many studies on ... have demonstrated... But there is a problem ...*”

**Step 3:** Please answer the following question in two to three sentences.

*What are the **key procedures** carried out to implement the main task? That is, how did you carry out the main task of your research? (e.g. conducting some experiments?) Please specify 2 ~ 3 points (one sentence per point).*

You may answer the question by beginning with “*In particular, firstly we conducted an experiment on ... Second, ... Third, ...*”

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<sup>1</sup> Conclusions are reached based on inadequate evidence or a sample that is too small.

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**Step 4:** Please answer the following question in two to three sentences.

*What are the main results achieved from the tasks in (3)? You may combine this section with (3).*

**Step 5:** Please answer the following question in one sentence.

*What is the **conclusion (thesis statement)** based on the main task carried out in your research? That is, what have you found in your research?*

You may answer the question by beginning with “Based on the results we found in ..., we can conclude that ...”

**Step 6:** Combine your answers to the above questions using one of the following abstract formats. You are free to change any of the words or phrases.

## **Abstract format 1 (for Science paper)**

**{Motivation}** Many studies on .... have demonstrated .... But there is a problem .... **{Main task}** In this study/research, we investigated ... **{Procedures & Results}** In particular, firstly we conducted an experiment on ... Then we compared the results from the experiment with ... Finally we conducted another experiment on ... **{Conclusion}** Based on the results we found in ... we can conclude that ... **{Implication}** [optional] One important implication of our conclusion is that ...

## **Abstract format 2 (for Humanities paper)**

**{Motivation}** Many studies on .... have demonstrated .... But there is a problem .... **{Main task}** In this study/research, we analyzed ... **{Procedures & Results}** In particular, firstly we studied the work by ... Then we compared the results from the study with ... Finally we further studied the work by ... **{Conclusion}** Based on the results we found in ... we can conclude that ... **{Implication}** [optional] The implication of our conclusion is that ...