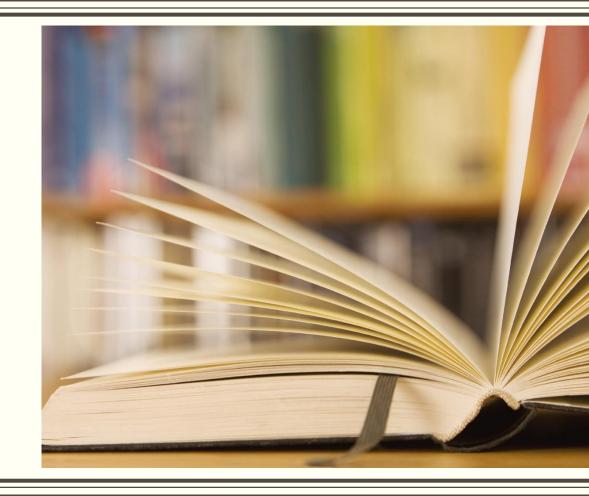# HOW TO WRITE AN ABSTRACT?

N. Zarrinabadi

Nur.zarrinabadi@gmail.com

Length

- A single paragraph of between 100–250 words containing a very brief summary of each of the main sections of your paper.

- The type of abstract you choose and the format to use will depend on the journal or conference. Make sure you read their instructions to authors before you begin writing.

When should I write the Abstract?

- Experienced writers always write the Abstract (and often the Introduction too) last, i.e. when they have finished the rest of the paper.

- This reflects the research process itself – the first thing you write about is what you found, then how this can be interpreted.

How should I structure my Abstract?

- · Why did I carry out this project? Why am I writing this paper?

- · What did I do, and how?

- · What were my results? What was new compared to previous research?

- · What are the implications of my findings? What are my conclusions and/or recommendations?

- However chemists, physicists, biologists etc. who are presenting some new instrumentation may want to focus not on what they found, but on what the benefits of their apparatus are and how well it performs.

Formal, natural and applied sciences.
How should I structure my abstract?
How much background information?

(1) The lifetime of a 4G cellular phone battery may be subject to the number of times the battery is recharged and how long it is charged for. To date, there has not been an adequate analytical model to predict this lifetime. (2) In this work an analytical model is developed which describes the relationship between the number of times a battery is recharged, the length of time of each individual recharge, and the duration of the battery. (3) This model has been validated by comparison with both experimental measurements and finite element analyses, and shows strong agreement for all three parameters. (4) The results for the proposed model are more accurate than results for previous analytical models reported in the literature for 4G cell phones. (5) The new model can be used to design longer lasting batteries.

Formal, natural and applied sciences.
How should I structure my abstract?
How much background information?

1. The problem that this paper is trying to resolve set in the context of the current situation. Why did you carry out your project and why are you writing this paper? What gap in the current knowledge do you hope to fill?

2. New solution given by authors of the paper. What is the innovative contribution of your work? What did you do and achieve? What makes it different from previous research?

3. Validity of the model. Does it really do what you say it does?

4. Results. What is new compared to previous results?

5. Implications and future work. What does this all mean? What are your conclusions and recommendations? What do you plan to do next?

Formal, natural and applied sciences.
How should I structure my abstract?
How much background information?

- This abstract only has a minimal amount of background information (two lines). This background information is given so that reader can understand the context of the author's research.

- Context setting should never take up more than 25% of the whole abstract, as it probably contains information that the reader already knows.

Social and behavioral sciences. How should I structure my abstract? How much background information?

(1) Three red flags were identified that indicate that the time to leave him has come. These red flags are: five burps per day, two sitting-zapping sessions per day, and fives games on the Playstation with friends per week. (2) A large number of women have doubts about the right moment for leaving their partner. Often women wait in hope for a change in their partner's habits. (3) One hundred couples were analyzed, recording their daily life for six months. Women were provided with a form to mark the moments of annoyance recorded during the day. Burps, sitting-zapping sessions and games on the Playstation with friends produced the highest index of annoyance. (4) The probability of eliminating these habits was found to be significantly low when the three red flags had been operative for more than three months. (5) Thus, these numbers provide a good indication of when the time to leave him has come. With these red flags, women will no longer have to waste their time waiting for the right moment.

Social and behavioral sciences. How should I structure my abstract? How much background information?

(1. Begin the abstract with one or two sentences saying what you did plus one key result, i.e. begin with information that the reader does NOT already know

2. Introduce the background by connecting in some way to what you said in your introductory sentence. The concept of leaving him is introduced in (1) and then referred to again in (2)

3. Use the background information (which the reader may or not already know) to justify what you did, and outline your methodology (and materials where appropriate)

4. Provide some more information on your results

5. Tell the reader the implications of your results

A humanistic Abstract

The above abstract covers the following elements, which typically appear in humanistic abstracts. The numbers below refer to the numbers in the abstract.

1. Background information - there tends to be more context setting in humanistic than in scientific

abstracts, and this may take up even 50% of the text

2. Gap in the knowledge - here the author challenges the accepted view on the topic. Using the question format, the author tells the reader what areas of the topic he plans to address. Questions create variety in an abstract and give it added interest

3. Methodology and results - the author provides some brief information on the data he used to get his findings

4. Conclusions

5. Implications - having implications in some way justifies why the author did his work, it

gives the work relevance, it shows that the work makes a real contribution and was not just

carried out for the author's own personal interest

What style should I use: personal or impersonal?

- I

- We

- The authors

- It was

What tense

- Simple present

- Simple past

- Present perfect/present perfect continuous for giving context/background

- present simple (established knowledge), present

- perfect (past to present background information), past simple (my

- contribution)

Structured Abstract

- Here are some typical sections in a structured abstract:

- From a journal of vegetation sciences:

- Question - Location - Methods - Results - Conclusions

- From an economics journal:

- Purpose - Design / Methodology / Approach - Findings - Practical implications - Originality /

- value - Keywords - Paper type

- From various medical journals:

- Background / Context / Purpose - Methods - Results / Findings - Conclusions

- Context - Aim / Objective - Design - Setting - Patients (or Participants) - Interventions /

- Treatment - Main Outcome Measure(s) - Results - Conclusions

- Context -

What should I not mention?

- You should try to avoid:

- · background information that is too generalist for your readers

- · claims that are not supported in the paper

- · terms that are too technical or too generic - this will depend on your audience

- · definitions of key terms

- · mathematical equations generic quantifications (e.g. *many, several, few, a wide variety*) and the overuse

- or unjustified use of subjective adjectives (e.g. *innovative, interesting, fundamental*).

 unnecessary details that would be better located in your Introduction, such as the name of your institute, place names that readers will not have heard of

- · references to other papers. However, if your whole paper is based on an extending or refuting

- a

Let's write

- Establishing the importance of the topic for the world or society

- X is a fundamental property of ....

- X is fast becoming a key instrument in ....

- X is a common disorder characterised by ....

- X plays an important role in the maintenance of ....

- Xs are the most potent anti-inflammatory agents known.

- X is a major public health problem, and the main cause of ....

- Xs are one of the most rapidly declining groups of insects in ....

- In the new global economy, X has become a central issue for ....

- X is the leading cause of death in western-industrialised countries.

- Xs are one of the most widely used groups of antibacterial agents and ....

Let's write

- **Establishing the importance of the topic for the discipline**

- A key aspect of X is ....

- X is a classic problem in ....

- A primary concern of X is ....

- X is at the heart of our understanding of ....

- X is an increasingly important area in applied linguistics.

Let's write

- **Establishing the importance of the topic (time frame given)**
- One of the most important events of the 1970s was ....
- Traditionally, Xs have subscribed to the belief that ....
- Recent developments in X have heightened the need for ....
- In recent years, there has been an increasing interest in ....
- Recent trends in X have led to a proliferation of studies that ....
- Recent developments in the field of X have led to a renewed interest in ....
- Recently, researchers have shown an increased interest in ....
- The past decade has seen the rapid development of X in many ....
- The past thirty years have seen increasingly rapid advances in the field of ....

Let's write

- **Synopsis of literature**

- Previous studies have reported ….

- Recent evidence suggests that ….

- Several attempts have been made to ….

- Studies of X show the importance of ….

- A number of researchers have reported ….

Let's write

- **Highlighting a problem**

- However, a major problem with this kind of application is ….

- Lack of X has existed as a health problem for many years.

- However, these rapid changes are having a serious effect on ….

- Despite its safety and efficacy, X suffers from several major drawbacks:

- However, research has consistently shown that these students lack ….

Let's write

- **Indicating the focus, aim, argument of a short paper**

- This paper contests the claim that ….

- This paper will review the research conducted on ….

- This paper will focus on/examine/give an account of ….

- This paper seeks to remedy these problems by analysing the literature of ….

Let's write

- Stating the purpose of research

- The major objective of this study was to investigate …..

- The aim of this study was to clarify several aspects of ….

- The aim of this study is to investigate the differences between X and Y.

- The aim of this research project has therefore been to try and establish what ….

- The main aim of this investigation is to assess the doses and risks associated with ….

- The aim of this study is to shine new light on these debates through an examination of ….

- The objectives of this research are to determine whether ….

- The main purpose of this study is to develop an understanding of ….

- This paper investigates the usefulness of ….

Let's write

- Synopsis of the research design, method, source(s) of data

- Five works will be examined, all of which ....

- Data for this study were collected using ....

- This dissertation follows a case-study design, with in-depth analysis of ....

- This study was exploratory and interpretative in nature.

- The approach to empirical research adopted for this study was one of ....

- The methodological approach taken in this study is a mixed methodology based on ....

- By employing qualitative modes of enquiry, I attempt to illuminate the ....

- This work takes the form of a case-study of the ....

- Both qualitative and quantitative methods were used in this investigation.

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- This work takes the form of a case-study of the ….

- Both qualitative and quantitative methods were used in this investigation.

Let's write

- **Giving reasons why a particular method was adopted or rejected**

- A case study approach was used to allow a ….

- Qualitative methods offer an effective way of ….

- A quantitative approach was employed since ….

- The design of the questionnaires was based on ….

- The X method is one of the more practical ways of ….

- The semi-structured approach was chosen because ….

- The X approach has a number of attractive features: ….

- The second advantage of using the multivariate method is ….

- For this study, the X was used to explore the subsurface ….

- Smith et al. (1994) identify several advantages of the case study, ….

- It was decided that the best method to adopt for this investigation was to ….

Let's write

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Let's write

- **Indicating a specific method**

- X was prepared according to the procedure used by Patel *et al.* (1957).

- The synthesis of X was done according to the procedure of Smith (1973).

- X was synthesised using the same method that was detailed for Y, using ….

- This compound was prepared by adapting the procedure used by Zhao *et al.* (1990).

- An alternative method for making scales homogenous is by using ….

- Samples were analysed for X as previously reported by Smith *et al.* (2012)

Let's write

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Let's write

- **Describing the characteristics of the sample**

- Eligibility criteria required individuals to have received ....

- A random sample of patients with .... was recruited from ....

- Forty-seven students studying X were recruited for this study.

- Just over half the sample (53%) was female, of whom 69% were ....

- Of the initial cohort of 123 students, 66 were female and 57 male.

- Only children aged between 10 and 15 years were included in the study.

- Eligible women who matched the selection criteria were identified by ....

- The students were divided into two groups based on their performance on ....

- All of the participants were aged between 18 and 19 at the beginning of the study....

Let's write

- **Describing the characteristics of the sample**

- Eligibility criteria required individuals to have received ....

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- Just over half the sample (53%) was female, of whom 69% were ....

- Of the initial cohort of 123 students, 66 were female and 57 male.

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Let's write

- **Describing the process: infinitive of purpose**

- In order to identify the T10 and T11 spinous processes, the subjects were asked to ....

- In order to understand how X regulates Y, a series of transfections was performed.

- To establish whether ....,

- To measure X, a question asking .... was used.

- To see if the two methods gave the same measurement, the data was plotted and ....

- To control for bias, measurements were carried out by another person.

- To rule out the possibility that X, the participants were ....

Let's write

- **Describing the process: other phrases expressing purpose**

- For the purpose of height measurement, subjects were asked to stand ….

- For the purpose of analysis, 2 segments were extracted from each ….

- For the estimation of protein concentration, 100 µL of protein sample was mixed with ……..

Let's write

- **Statements of positive result**

- Strong evidence of X was found when ….

- This result is significant at the $p = 0.05$ level.

- There was a significant positive correlation between ….

- There was a significant difference between the two conditions ….

- On average, Xs were shown to have ….

- The mean score for X was ….

- Interestingly, for those subjects with X, ….

- A positive correlation was found between X and Y.

Let's write

- **Statements of negative result**

- There was no increase of X associated with …..

- There were no significant differences between ….

- No significant differences were found between ….

- No increase in X was detected.

- No difference greater than X was observed.

- No significant reduction in X was found compared with placebo.

Let's write

- **Statements of negative result**

- There was no increase of X associated with …..

- There were no significant differences between ….

- No significant differences were found between ….

- No increase in X was detected.

- No difference greater than X was observed.

- No significant reduction in X was found compared with placebo.

Let's write

- **Statements of result: usually with reference to results section**

- The current study found that ....

- The most interesting finding was that ....

- In this study, Xs were found to cause ....

- The results of this study show/indicate that ....

- This experiment did not detect any evidence for ....

- On the question of X, this study found that ....

- The most important clinically relevant finding was ....

- Another important finding was that ....

- In the current study, comparing X with Y showed that the mean degree of ....