

# Tips for scientific writing: an introduction

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Like the title and abstract of your research paper, the introduction of your article should also be able to influence peer-reviewers and readers. A well-written introduction should provide appropriate background knowledge to encourage or convince readers about the novelty, rationality and significance of your study.

The introduction should comprise short paragraphs and highlight important points with acceptable justifications usually using references. The purpose, importance, hypothesis or research question of the study, main limitations and existing solutions should be stated in the introduction of your article.

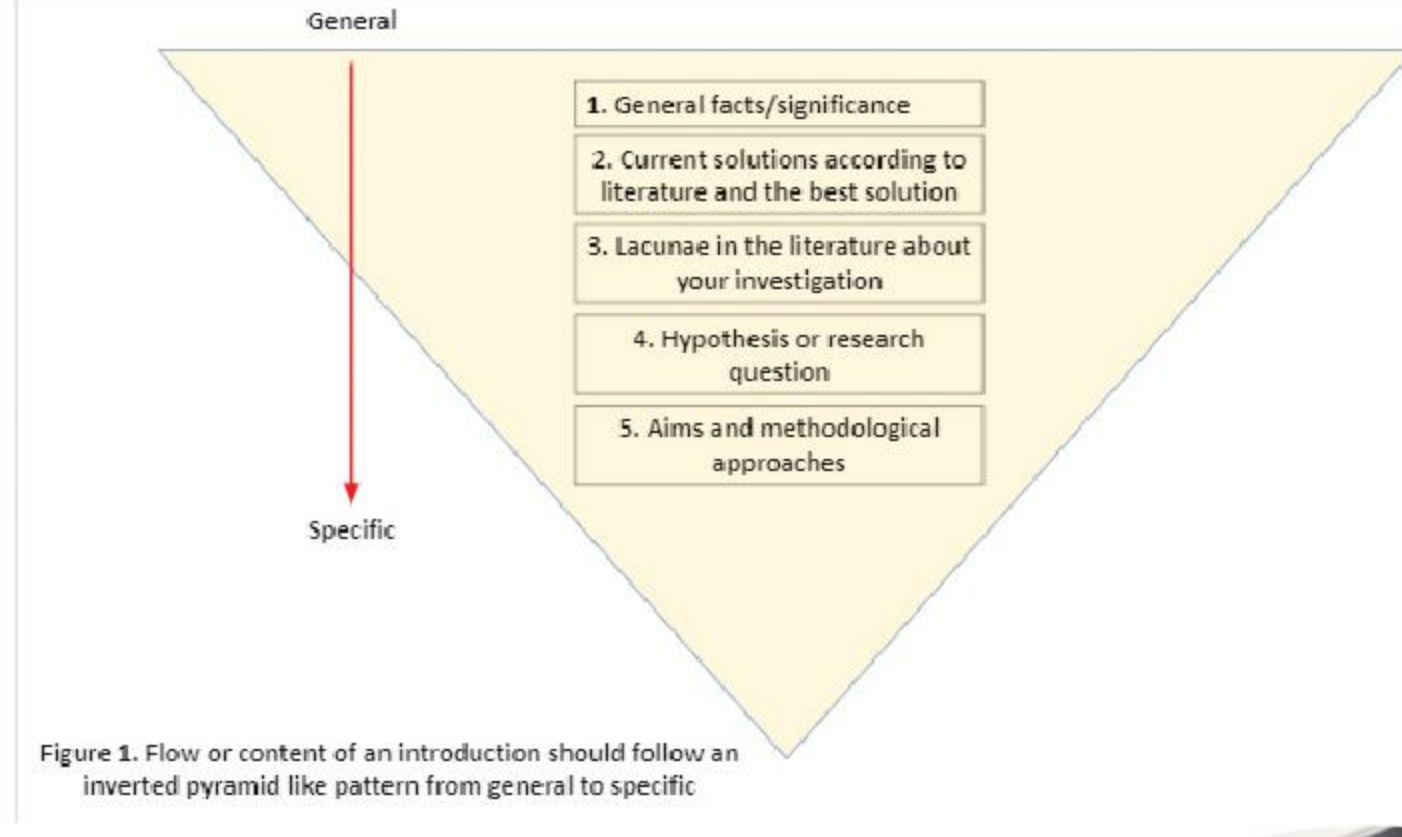
In the early 80s, writing an introduction of a science communication was highlighted as an independent section. Reports available on scientific writing illustrate that writing an introduction is not just playing with word or terminologies to fit the facts, it should strongly express perceptions of peer-colleagues.

## Mental road map

Some reports indicate that the introduction as a gate or entrance to city. It has also been referred as a 'mental road map' that should clarify 'known-facts', 'un-known facts' and the results of findings of your investigation.

Like an abstract, the introduction should act as a hook to the scientific communication, allowing readers to notify the question they expect. With a good introduction, you can market your paper to peer-reviewers, editors and readers.

Imperfect, inaccurate and outdated content in article introductions may lead to rejections. Introductions with accurate and updated contents can make reviewers impressive. While I was reviewing some manuscripts, I



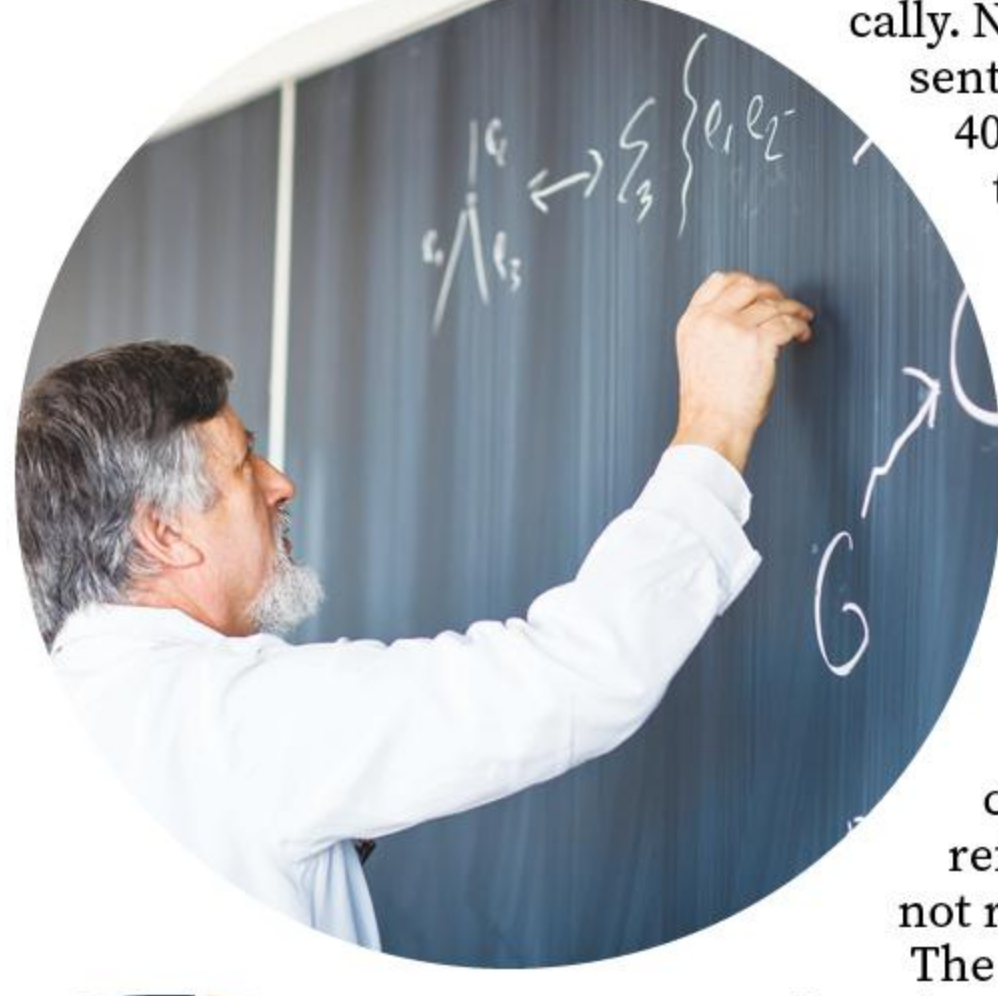
**A WELL-WRITTEN INTRODUCTION USUALLY CONTAINS FOUR PARAGRAPHS. SOME PAPERS END THE INTRODUCTION WITH IMPORTANT FINDINGS OF THE PAPER. HOWEVER, IT IS ADVISABLE TO AVOID MAIN FINDINGS OF YOUR INVESTIGATION IN THE INTRODUCTION**

have come across many introductions with outdated literature.

For example, a paper I received in 2020 to review had mentioned some breast cancer statistic data published in 2015, which gave me a bad impression about the paper and made me to think about the author's scientific literacy skills and reading habits. As I mentioned in my first write-up, you can be a good scientific writer by reading!

As shown in the Figure 1, the flow or content of an introduction should follow an inverted pyramid like pattern (Numbered as 1, 2, 3, 4 and 5) from general to specific. The first part explains general facts/topic and significance about the investigation. The next section should describe current solutions.

Following current solutions, the main limitations or lacunae in the literature about your investigation should be explained. The inverted pyramid then narrows down to the hypothesis or research question and aims of the investigation.



Normally, the length of a sentence should not exceed 40 words. Also, 10-15 sentences are recommended to one paragraph.

Proper referencing is vital for an introduction. As mentioned before, authors are requested to use recent and up-to-date references to give a quality to their work. Be cautious never to cite a reference which you have not read.

The style of referencing is unique for a given journal. Sometimes, journals limit the number of references depending on the article type.

A write-up on referencing will be published in coming weeks. More importantly, the usage of correct verb tenses allows authors to make a logical connection with different parts of the paper. Past and present tenses are commonly used in the introduction of scientific communications.

Some authors believe present tense is more appropriate to describe observations of the study. However, sometimes, a transitional verb tense is also seen in introductions: Present simple (at the beginning) to present perfect (to describe research problem) and again present simple at the end of the introduction to show the research hypothesis.

The introduction is not normally structured. The addition of genuine figures to the introduction is also allowed. Collectively, a well-written and balanced introduction should influence the readers that your investigation is significant in the framework of what is already identified. Next week's article will summarise tips for writing methods for scientific articles.



## Convincing readers

A well-written introduction usually contains four paragraphs. Some papers end the introduction with important findings of the paper.

However, it is advisable to avoid the main findings of your investigation in the introduction. Findings of your study should discuss in the discussion section of your pa-

per. The length of an introduction could vary depending on the type of paper. Some 700-800 words are typically sufficient for an introduction.

It is recommended to keep the introduction 10% to 15% of your total manuscript excluding abstract and references.

The first and second lines of each paragraph of the introduction should be strong enough to convince the readers by telling what to expect from the given paragraphs.

Therefore, the first lines of each paragraph should be written logi-

