



ISSN: 2091-2749 (Print)  
2091-2757 (Online)

<https://doi.org/10.3126/jpahs.v11i2.72225>

## Common mistakes in writing introduction of a scientific journal article

Nabees MS Pradhan  

Chief Editor, Journal of Patan Academy of Health Sciences (JPAHS), Patan Academy of Health Sciences (PAHS), Lalitpur, Nepal

The introduction of a scientific journal article is the first section of the manuscript a reader goes through. The introduction establishes the context for the research, highlights the gap in knowledge that the study aims to address, and articulates the objectives of the topic under study. The way it is presented can be detrimental for the reader in making a decision whether to go to the next section of the article or to discard it entirely.<sup>1</sup> A well-crafted introduction not only grabs the reader's attention but also sets the tone for the entire paper. Writing a good introduction takes a thorough understanding of the topic, and also the essence of how the study is going to answer the research question. Many authors, especially newbies, make some common mistakes when drafting this essential section. Understanding these pitfalls and avoiding them can significantly improve the clarity and impact of a manuscript.

### Too much Background Information

While it is important to give background information, one of the commonest mistakes is to overload the section with it. An overly detailed information or a lengthy description of foundational theories can dilute the main purpose of the study and overwhelm the reader at the same time.<sup>2</sup> It is essential to remember that in this era of information overload, the readers who look for an article are generally already familiar with the field, so the introduction should focus on what is relevant to the specific research question being addressed. For example, for an outcome study related to the Locking Compression Plate in treatment of distal tibial fractures, instead of describing the history of different types of plates and nails for osteosynthesis, a more logical approach would be to write 'With the evolution of different types of plates and nails, and the fact that the distal tibia has precarious blood supply, the locking compression plate has come up with a solution of minimally invasive procedure, finding the right balance between the biomechanics and tissue biology.'



**How to Cite:** Nabees Man Singh Pradhan. Common mistakes in writing introduction of a scientific journal article. Journal of Patan Academy of Health Sciences. 2024 Aug;11(2):1-4.

**Correspondence:** Dr. Nabees Man Singh Pradhan, Chief Editor, Journal of Patan Academy of Health Sciences, Patan Academy of Health Sciences, Lalitpur, Nepal, **Email:** nabees.pradhan@dr.com

The trick is to make it concise and focus on the key studies or concepts that directly relate to your research; limit background information to the most critical details that help position your work within the existing literature.

### **Overly broad scope**

Some introductions attempt to cover too much territory, making them unfocused and difficult to follow. Some even stray away from the objectives of the study and start describing a different issue. A broad scope can dilute the focus of the study and fail to guide the reader toward the specific aims of the paper, while unrelated issues render the article look useless to many readers. The introduction should serve to narrow the focus from general background to the specific research problem.<sup>3</sup> Moreover, the literature review should cover the global, regional and local studies relevant to the article (inverted triangle), with emphasis on higher level studies and most recent ones as per the relevance.

This can be overcome by starting with a broad context and progressively narrow the focus to your specific research question. Make it clear how the research fits into the broader field without trying to cover everything.

### **Lack of a clear research problem or gap**

By simply stating the broader research topic the reader is left to wonder why the study is necessary in the first place. It is imperative to pinpoint the specific issue or limitation in the current literature pool that your study is going to address. Failure to define the research problem or the gap in the literature that the study aims to address often leads to failure of the introduction to provide the desired effect of clarifying and generating interest among the readers.

This can be avoided by clearly articulating the gap in knowledge or unresolved question in the field. This could be a limitation in previous studies, an unexplored aspect of the topic, or a methodological shortcoming that your study seeks to overcome.

### **Vague or Broad Aim/Objectives**

A lack of clarity in outlining the aim/objectives of the study can also weaken the introduction. Many authors write introductions that leave the reader unclear about the specific aims of the research. For example, phrases like “we aim to explore” or “this study investigates” are too general and do not define what exactly is being examined or the scope of the study.

To correct this you just need to be specific about the research objectives. Clearly state what your study

seeks to investigate, whether it is a hypothesis to test, a theory to evaluate, or a particular phenomenon to explore.

### **Failure to establish significance and to highlight the rationale of the study**

The next common mistake while writing an introduction is the failure to clearly state the significance and the rationale of the study. An introduction should not only explain what the study is about but also why and how it matters, both in terms of advancing the field and its practical implications. Without this, the introduction can come across as merely a formality, rather than a compelling rationale for the research. On the other hand, an over-ambitious statement that manifests exaggeration of the impact a study can make, especially when it doesn't tally with methods and subsequent analysis, can be a repelling factor for readers.<sup>2</sup>

Avoiding this will need you to emphasize the potential contributions of your research. How will your study fill the knowledge gap? What is the broader impact of your findings, either in theory, practice, or policy? But care should be taken not to exaggerate the significance and the potential contribution your study can make.

### **Overuse of technical jargon**

Introduction serves as the gateway for broader and general readers of the related scientific community to find out the necessary information in an article. While scientific writing often requires the use of technical terms, overwhelming use of specialized language can alienate readers who are not experts in the subfield. Excessive use of jargon can lead to readers unable to fully understand the essence of what an introduction should be able to achieve in grabbing attention of the broader scientific audience.<sup>4</sup>

Tip: Use technical terms judiciously and define them where appropriate. Aim for clarity and readability, assuming that your audience may include interdisciplinary researchers, reviewers, and readers who may not be deeply familiar with the specific subfield.

### **Lack of logical flow/articulation**

Like any other article, an introduction of a scientific article that lacks a clear structure can be difficult to interpret and can lead to confusion among readers. Jumping from one idea to another without clearly linking concepts or establishing a logical progression is one of the most common errors by young authors. For example, the introduction might move abruptly from background information to research aims without explaining the connection between them.

Sometimes there is disarticulation between the background information, objectives, and the rationale of the study, rendering the authors to make guesses about what the study is actually trying to prove.

The trick is to organize the introduction in a logical sequence: start with general background, narrow down to the specific problem, then clearly state the research objectives. Each paragraph should logically follow from the previous one, guiding the reader through the rationale for the study.

### **Overemphasis on hypothesis, objectives or methods**

Research hypothesis is essential to formulate research questions and specific objectives that provide solution to the questions. However, placing too much emphasis on explaining the research hypothesis, objectives or the methodology in the introduction, even before outlining the specific research question or the background context will render readers clueless about the background, aim and rationale of the study. It is important to understand that while hypotheses and methods are central to scientific work, they belong in later sections of the article, not in the introduction.

Tip: The introduction should focus primarily on the research question, the gap in knowledge, and the significance of the study. Leave the detailed discussion of methods and hypotheses for the methods section.

### **Over- or under-citation of the literature**

Striking the right balance in referencing previous work is crucial. On the one hand, excessive citations can make the introduction feel cluttered and might distract from the central message. On the other hand, insufficient citation can make the research appear disconnected from the existing literature pool, which may raise concerns about the originality or validity of the work.<sup>2</sup> Some completely omit the findings from local studies, which many a times, are more meaningful and relevant than higher level studies from a different setting. Citing local studies not only increase the visibility of local research findings to the world, but acknowledging local authors for their efforts build a foundation for further research in the local setting.

The trick is to cite only the most relevant and influential studies that are directly related to your research. It is essential to ensure you acknowledge key authors and works but avoid overloading the introduction with an exhaustive literature review. Do not forget that local studies can often provide the much needed clarity in local context of the topic under study than the one done in a different setting, albeit published in a higher impact journal.

### **Making bold claims**

Research doesn't just pop out from vacuum. Claims like 'No study has been done previously' not only undermines the author's authenticity, but also exposes the lack of knowledge in terms of existing literature, and how the current study is going to supplement the existing knowledge gap. It is not only absurd to make such claims, but it also shows the lack of maturity from the author.

Tip: Do a thorough literature search, filter out the articles irrelevant to your study, out of the useful articles identify and highlight the research gap, and also provide how you are going to address the issue.

### **Lack of engagement**

Finally, an introduction should engage the reader by clearly stating the value of the research. A dry, overly formal introduction may fail to capture the reader's attention, leaving them uninterested in proceeding with the rest of the article. A strong introduction should provide enough information to entice the reader to keep reading.

Tip: Craft an engaging narrative by balancing informative content with a compelling reason for why the study matters. Use active language and make sure the reader understands the importance of the research from the outset.

### **Conclusion**

The introduction is more than just a formality in a scientific journal article—it is the foundation upon which the rest of the paper is built. Introduction of a scientific article should focus on and pinpoint the research gap and the question to be answered by the study. A concise background relevant to the study, followed by global, regional and local findings of related field, focused highlight on the aim, significance and the rationale of the study can provide a captivating introductory remarks that will not only deliver a strong message about the article but also engage the readers to finish the whole article. Lack of research question or a broad research question often leads to a superficial and diluted study that is not palatable to most readers. By avoiding common mistakes like excessive background, vague objectives, and unclear structure, authors can write introductions that effectively communicate the purpose and importance of their study, capturing the reader's interest and ensuring that the research is understood within the broader scientific context. A practical approach to assess the quality of the introduction is to let a reader in the respective field to read the section sans the objectives. If the person

clearly pinpoints the objectives, it is a well written introduction that is aligned with the proposed theme and title.<sup>3</sup>

## References

1. Cassuto, Leonard. "On the Dissertation: How to Write the Introduction." *The Chronicle of Higher Education*, May 28, 2018; Radich, Michael. *A Student's Guide to Writing in East Asian Studies*. (Cambridge, MA: Harvard University Writing n. d.), pp. 35-37. | [Google Scholar](#) | [Weblink](#) |
2. Sandeep B Bavdekar. Writing Introduction: Laying the Foundations of a Research Paper. *Journal of The Association of Physicians of India* 2015 Jul;63(7):44-6. | [PubMed](#) | [Google Scholar](#) |
3. Silveira, Erika Aparecida; Romeiro, Amanda Maria de Sousa; Noll, Matias; Abreu, Luiz Carlos. Guide for scientific writing: how to avoid common mistakes in a scientific article. *Journal of Human Growth and Development (Impresso)*; 32(3): 341-352, 31/10/2022. | [DOI](#) | [Full Text](#) |
4. Hirst, R. (2003). Scientific Jargon, Good and Bad. *Journal of Technical Writing and Communication*, 33(3), 201–229. | [DOI](#) |