

Publishing Research Journals, Reviews, Impact Factor

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Publishing Research

- ❖ Why publish?
- ❖ Publish what?
- ❖ Do I have enough to publish or should I do another experiment or collect more data? **You are never really done, so just stop at some point and publish !**
- ❖ Where should I publish? – **Make sure the journal publishes the type of work you are submitting to it.**
- ❖ How to publish?
 - ❖ Paper, Communication, Review, Perspective

What is an impact factor? And should I care?

- ❖ The impact factor (IF) or journal impact factor (JIF) of an academic journal is an index that reflects the yearly average number of citations to recent articles published in that journal.
- ❖ The impact factor is used to compare different journals **within a certain field**.
- ❖ **Impact Factor is not a perfect tool to measure the quality of articles** but there is nothing better and it has the advantage of already being in existence and is, therefore, a good technique for scientific evaluation.
- ❖ Prestigious journals publish papers of high level. Therefore, their impact factor is high, and not the contrary.

A Short Article

❖ <https://www.elsevier.com/connect/11-steps-to-structuring-a-science-paper-editors-will-take-seriously>

A Short Article

- ❖ Abstract
- ❖ Introduction
- ❖ Experimental
- ❖ Results and Discussion
- ❖ Conclusion

A Short Article – One Approach

- ❖ Prepare the Figures and Tables.
- ❖ Write the Methods/Experimental Section.
- ❖ Write up the Results.
- ❖ Write the Discussion. Finalize the Results and Discussion before writing the introduction. This is because, if the Discussion is insufficient, how can you objectively demonstrate the scientific significance of your work in the Introduction?
- ❖ Write a clear Conclusion.
- ❖ Write a compelling Introduction.

A Short Article – One Approach

- ❖ Write the Abstract.
- ❖ Compose a concise and descriptive Title.
- ❖ Select Keywords for indexing.
- ❖ Write the Acknowledgements.
- ❖ Write up the References –
 - be sure to use the specific format used by the journal
- ❖ Check the overall submission requirements set by the journal – you can save yourself some time

A Short Article

The Title

- ❖ The title must explain what the paper is broadly about.
- ❖ It is your first (and probably only) opportunity to attract the reader's attention.
- ❖ The first readers are the Editor and the referees. Also, readers are the potential authors who will cite your article, so the first impression is important!
- ❖ You can only make a first impression once !

A Short Article

The Abstract

- ❖ The abstract tells prospective readers what you did and what the important findings in your research were.
- ❖ Together with the title, it's the advertisement of your article.
- ❖ Make it interesting and easily understood without reading the whole article. Avoid using jargon, uncommon abbreviations and references.
- ❖ Highlight what is novel and important about the work described in the paper.
- ❖ Try not to exceed 250 words

A Short Article

The Introduction

- ❖ What is “the message” you are trying to convey to the reader?
- ❖ What did you/others do? Why did you do it?
- ❖ What is the problem to be solved?
- ❖ Background – general info on “the message”
- ❖ Foreshadowing the general topic
- ❖ Putting your work into perspective
- ❖ Acknowledging prior work by referencing it
- ❖ Concluding with a summary sentence that tells the reader what to expect

A Short Article

The Experimental Section

- ❖ This section details how the problem was studied and how the experiments were performed. If you present **a new method**, you need to be very detailed in your description so other scientists can reproduce the experiment.
- ❖ For chemicals, list the name, purity and supplier (company)
- ❖ For species, use accepted taxonomical nomenclature
- ❖ For units of measurement, follow the International System of Units (SI).

A Short Article

The Results and Discussion Section

- ❖ Results – facts
- ❖ This section details what have you found. It should focus on results from your research and not be a review of what others have done. But, the work needs to be discussed in context. It's a balance. The results should be essential and used in the discussion.
- ❖ Discussion – analysis and opinion
- ❖ Explain what the results mean. This it is a very important section of your article. You can showcase what you have discovered and indicate why it is important. Many manuscripts are rejected because the Discussion is weak
- ❖ Two options – separate results and discussion section
- ❖ One combined section

A Short Article

The Results and Discussion

- ❖ "A figure is worth a thousand words."
- ❖ **Good** illustrations, such as figures and tables, are the most efficient and often impactful way to present your results. Your data are the driving force of the paper! Good illustrations can readily summarize the information for the reader.
- ❖ Tables list actual experimental data and results
- ❖ Figures summarize and compare data and results with those of others, or with calculated/theoretical values
- ❖ How many is too many Illustrations?
- ❖ Font size – once figure or table is reduced to journal page limitation – text may be too small.

A Short Article

The Conclusion

- ❖ Ideally – a conclusion describes what you have learned or how your work advances the field from its present state of knowledge
- ❖ Less ideal but common – simply a summary of what you have just discussed in the paper
- ❖ Go for the first !

- ❖ Before you actually submit the paper you should have others read it and give you feedback on clarity and flow, typos and other problems – like part of a figure is missing etc.

Reviewing Papers: The Peer Review Process

❖ <https://www.elsevier.com/connect/reviewers-update/theyve-got-it-all-wrong!-how-to-give-constructive-feedback-in-peer-review2>

Reviewing Papers: The Peer Review Process

- ❖ Try to frame your feedback and criticism positively
- ❖ Be specific – **the figure was not clear vs. the color scheme was confusing in figure 3.**
- ❖ Be nice – **don't be nasty in what you write**
- ❖ Be realistic – **don't suggest a year's worth additional work. Don't tell the authors what paper they should have written; tell them how to improve the paper they have written**
- ❖ Distinguish between real problems – incorrect analysis - and minor issues – typos
- ❖ Help the author as you would like to be helped by reviewers of your own papers

Reviewing Papers

The Peer Review Process

- ❖ Always assume the reviewer is trying to help you
- ❖ Don't say:
“This reviewer has not idea what he / she is talking about”
How do you know they are not the top experts in the field?
- ❖ Don't be snarky in your “response to reviewer” document – often it goes back to the reviewer and you don't want to annoy them.

Reviewing Papers

The Peer Review Process

- ❖ To respond – list all comments and address them individually
- ❖ Don't say “I have addressed all comments in the paper” and leave it at that. The editor will return it to you or if they are in a bad mood, reject it.