

Research Article Self-Check Questions

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This checklist:

Is intended as an **author checklist** to help you revise your own articles just before submission to a journal. It assumes that the **article in question is nearly ready** and that you have already **selected a target journal for it**.

Summarizes **general guidelines** that may not fully comply with the rules and conventions of your discipline or your target journal. Once you have chosen your journal, you should always ultimately follow the journal's **Author Guidelines**. This document, sometimes also called Instructions for Authors, Submission Guidelines, or something similar to this, is usually available on the target journal's website. It provides details for all manuscript submission requirements, especially for formal issues (e.g., margins, spacing, preferred citation style).

If you have questions, schedule a consultation with us:

<https://www.techlib.cz/en/83810>

General

- Have you read and followed all the instructions in your target journal's Author Guidelines? Pay special attention to the policies regarding the use of assistive and generative AI. (If, for some serious reason, you cannot comply with them, you should explain this in the cover letter or communicate it to the Editorial Office before submission.)
- Has your manuscript been posted on a preprint server? If so, is this in line with the target journal's Author Guidelines?
- Have you checked publishing and licensing conditions for the target journal? If the target journal allows you to choose a copyright license, have you decided which license you want to use?
- Has the manuscript been checked by an independent reader familiar with the topic? Was the message clear or did the reader have trouble understanding something?
- Has the manuscript been checked by a native speaker/professional proofreader?

Throughout the Text

- Is terminology consistent and correct throughout the manuscript? Have you checked for typos and layout problems?



DOI: <https://doi.org/10.48813/3933-3c82>

- Are you using verb tenses, active/passive voice etc. consistently and properly throughout the manuscript? For more information on effective writing, see <https://www.nature.com/scitable/ebooks/english-communication-for-scientists-14053993/writing-scientific-papers-14239285/>
- Are all the information sources properly cited, including DOIs (if applicable), in accordance with the Author Guidelines?
- Have you explained all abbreviations (apart from generally known abbreviations such as EU or DNA)?

Title

- Does the title reflect the main point of the article?
- Does the title comply with the Author Guidelines?

Author List

- If there are multiple authors, have you all agreed on the final order you will be listed?
- Do you have an ORCID for all authors, including yourself? Read more: <https://www.techlib.cz/en/84782>
- If required, have you described the contribution of each author according to CRediT? Some journals require the use of CRediT exactly as is, while others allow modification to the roles. Read more: <https://credit.niso.org/>

Abstract and Keywords

- Does the abstract provide a complete summary of the article? Would a reader familiar with the topic understand the most important aims, methods, and results of your study upon reading it?
- Does the abstract accurately reflect the content of the article?
- Does the target journal have a limit on the length of the abstract? Is your abstract within this limit?
- Does the target journal require a graphical abstract? If you have a graphical abstract, does it follow all the Author Guidelines regarding its content, format, size, and so on?
- Have you chosen keywords so that they do not repeat what is in the title of the article?
- Have you considered using ontology/controlled vocabulary to enhance the quality of your keywords/make your article more findable? Some publishing houses have these ontologies available in the submission portal. Here is one example of such an ontology for chemistry: <https://www.chemfont.ca/simple>
- How many keywords should you have according to the Author Guidelines? Do you have enough or too few/too many?

Introduction & Literature Review

- Does your study clearly explain a research problem? Is there a clearly defined hypothesis/research question/aim?
- Does the introduction explain why it is important to address the issue? Is it clear why you conducted the study?

- Does the text of the introduction and the literature review describe the state-of-the-art? Does it naturally lead to the research gap filled by your results? All information included in this section should be key to understanding why you did the study the way you did it. Avoid including irrelevant information just to show off how much you have read.
- Is it clear whether there has been a similar study before? If not, why? If so, what is the original contribution of your study?

Methods

- Do you explain why you chose to use certain methods? Do you describe what the limitations of your methods are?
- Have you described all methods, materials, and tools used in the research conducted, including preparation, analysis, and data visualization? If applicable, include criteria for data collection/selection of data, measurement processes, analytical/statistical methods and tools. Did you clearly state any re-used data (if applicable) and reference to these datasets?
- Are all your methods described clearly and accurately enough to replicate/validate your study?

Results

- Do the results include all the information necessary for their interpretation, e.g., *P*-values, units (if applicable)?
- Does the data in tables and charts match the information presented in the text? Have you double-checked all calculations?
- If you are using equations, have you formatted them as required by the target journal?

Discussion & Conclusion

- Have you included all your hypotheses/research questions? Do you state clearly whether they were confirmed/rejected/answered?
- Do you support your claims in Discussion with appropriate literature? Do you discuss the extent to which your results are consistent with, or divergent from, similar studies?
- If some findings deviate from expectations, have you explained why?
- Have you included clearly stated limitations of the study?
- Do you describe the study's contributions to your discipline and/or implications as well as recommendations for real-world applicability and future research?

Figures (Charts, Graphs, and Pictures)

- Are all figures in the correct format, resolution, and so on, as required by the Author Guidelines?
- Are all figures truly the best way to present findings? Do not include figures simply for the sake of making the article more visually interesting.
- Are all figures properly referenced in the text? Are they all numbered and named/captioned according to the target journal's Author Guidelines?
- Does each caption/note clearly and concisely explain what the figure is depicting? Does the legend cover all the symbols, units, and scales used in the figure?

- Are all abbreviations explained in the caption/note (apart from generally known abbreviations such as DNA or EU)?
- Are all figures easy to read? Are all the lines and symbols easy to distinguish even if the figure were to be printed in lower quality? Are you using a daltonism-friendly color palette?
- If you are using figures you have not authored, do you have permission to use them? Is the figure protected by a license (e.g., CC-BY)? Is using the figure necessary?

Tables

- Does every column have a legend/heading? Did you include units for all the measurements?
- Is it necessary to include all columns? Could you move some of the information to an appendix/label?
- Do all listed measures have reasonable accuracy, number of decimal places, and so on?
- Are all tables properly referenced in the text? Are they all numbered and named/captioned according to the target journal's Author Guidelines?
- Does every title/caption/note clearly and concisely explain the contents of the table? Does it explain all the abbreviations used (with the exception of generally known abbreviations such as DNA or EU)?

References

- Are all in-text citations as well as the reference list formatted according to the target journal's Author Guidelines? Have you included DOIs whenever applicable?
- Does the reference list include all citations listed in the text and do all references have a corresponding in-text citation?
- In the text itself, is it clear which parts of the text are original and which paraphrased? Note that most journals pre-check texts for plagiarism (including self-plagiarism) as part of the submission process.
- Have you included a description of how the readers can get to the research data (e.g., research data published in an online repository)? Does the target journal require the data to be available online? If so, did you follow the journal's data availability policy?

Acknowledgements, Funding, Disclosures

- Have you listed all sources of funding for your work (e.g., the Czech Science Foundation, the European Union) in the manner outlined in the Author Guidelines? Do your funding statements comply with funding agency requirements?
- Have you credited colleagues who assisted you with the manuscript but are not its co-authors (e.g., colleagues/editors who reviewed the manuscript, librarians who helped in the research process)?
- Does the target journal allow the use of generative AI/LLMs? If it does and if you used such a tool in producing your article/research, do you clearly state where and how you used it? Have you cited it as required, if necessary?

- Do you clearly state any potential conflicts of interest?
- Has the study been approved by an Ethics Committee or Institutional Review Board? Do you mention this, including when the study was approved and by whom? (Especially relevant for those working with humans, animals, or sensitive issues.)

Additional Documents

- Have you included a cover letter to the editor? Only some journals may require one, but it is a good idea to include one in any case.
- If you are attaching supplementary files, are they in a common format (e.g., pdf or docx)? Do not use formats that are only compatible with specialized commercial software. For more info about preferred data formats, see our guide at: <https://www.techlib.cz/en/84974-research-data-management>

Practical Tips

- Use citation managers (e.g., Zotero, Mendeley). Read more: <https://www.techlib.cz/en/83321>
- Use grammar check/writing tools (e.g., Grammarly, Writefull); list all use of generative AI in Acknowledgements or as required by your target journal. Read more: <https://www.techlib.cz/en/84766>
- Build a network of peers/colleagues who will critically read your work prior to submission ("pre-peer review").
- Sharpen your skills by attending writing webinars and workshops at your institution or online at NTK: <https://www.techlib.cz/en/83809>
- Ask us in an individual consultation: <https://www.techlib.cz/en/83810>
- More about academic writing and publishing: <https://www.techlib.cz/en/83646>
- More about research data management: <https://www.techlib.cz/en/84974>

Further resources:

Provenzale, J. M., & Stanley, R. J. (2005). A Systematic Guide to Reviewing a Manuscript. *American Journal of Roentgenology*, 185(4), 848–854. <https://doi.org/10.2214/AJR.05.0782>

Bloschl, G. (2011). *How to write (and publish) a scientific paper in hydrology*. European Geosciences Union General Assembly 2011, Vienna. https://younghydrologicsociety.files.wordpress.com/2019/11/bloschl_iugg_2019_iahs_sc.pdf

OR, D. (n.d.). *Writing a scientific paper*. https://ethz.ch/content/dam/ethz/special-interest/usys/ibp/soil-terrestrial-env-physics-dam/education/scientific_comm/2015/1-Writing_scientific_paper_ethz_2015.pdf

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