

Revising a technical article - A checklist

I'm not a very good writer - but I'm an excellent rewriter - J. Michener

Orient your paper into a suitable category - theoretical, experimental, applications, empirical analysis and so on. Check if the subject of the paper comes under the scope and objectives of the journal you have chosen. The organization and the presentation of the paper is important although the contents are more so. Therefore after you prepare a first draft revise it before sending for a review. There are books written on how to write a technical paper.

The following are some useful hints that should be considered while revising a paper:

1. The title of the paper should reflect the contents of your paper. Modify the title to make it more accurate and attractive. You can copy the style of similar papers in the chosen journal. Avoid uncommon or invented abbreviations in the title.
2. A technical paper should not just look like a theory paper unless it is necessary; it should look like a research paper with properly identifiable contribution(s). Hence it needs to be developed as a journal paper with significant effort during rewriting. The first draft may often contain different ideas - see if there are correlations between these and decide if you should put all these. The length of a paper is another factor - there are notes, short papers, regular papers, surveys - the journal home page should give more information.
3. Define the acronyms when they first appear. Define the key words if they are your own.
4. Mostly, the abstract of the paper reads poorly in the first draft. Revise it so that it provides motivation and justification. Whatever you mention in abstract, it should reflect in the entire contents of the paper. Many authors prefer to write the abstract at the end! Do not give cross-references in the abstract unless needed as the abstract is abstracted by other publications that disseminate research on various topics.
5. For a regular length paper, the introduction (section 1) should suitably motivate the readers in the subject. Therefore, it should be strengthened further by including relevant justification of the current research, using 5-8 latest recent references from journals of good quality. (impact factor may be of help) This will be a value addition.

6. Wherever you as an author make any bold statements or tall claims please always support the statement with a literature review and empirical results.
7. Usually a paper can have a separate section (Section 2) on “literature review”. Develop a decent literature review in order to provide the motivation, scope, significance and justification of the current research. Also, try to include some latest journal article references (8-10) published within the last five years (including extracts) in the relevant areas to improve the relevance and currency of the research. Try to include 3-4 references from good journals to improve the currency of the paper; it should reflect the scope, the limitations, why the study is significant, what is the motivation etc.
8. You have to clearly define the research objectives and hypotheses in Section 3 which may be titled Objectives and Methodology/Background and Assumptions. This section needs to be organized so that the reader gets an idea of the work in the subsequent sections. Section 3 may introduce your work.
9. Section 3 on research methodology can describe the data collection methodology, for example and its justification, given the research objectives and hypotheses/assumptions. Use some citations to justify the research methodology.
10. Section 4 and the subsequent one or two sections should elaborate your actual work. Section 4 may be on empirical results and analyses, for example.
11. Read the paper to uncover any weaknesses that may be present. You might have collected valuable data, but not analyzed, explained and motivated to provide useful and new insights into the subject. This can be a major weakness.
12. The section on conclusion should elaborate the contributions of the paper, limitations of the research and some future research directions. Usually the discussions on the implications of your research should not be in the conclusion.
13. See if your tables, diagrams, graphs are of journal quality. Make sure that they are properly captioned and the legends demystified.
14. Check to see if any section needs an appendix so that some portions may be moved to improve the clarity of presentation.
15. See if you have followed the journal’s referencing style (e.g., Harvard style) both within the text and at the end.
16. Missing reference details such as volume number, issue number and page number should be fixed.
17. Check the language of the paper - see if it needs editing. Check the English (British or American) and the grammar. The importance of proof-reading cannot be over emphasized: make sure that your paper is free from typos.