



PMUSER

Proceedings of Manitoba's Undergraduate Science and Engineering Research

Guidelines for Reviewing a Submitted Contribution to PMUSER

You should consider these aspects before committing yourself to the review:

1) Purpose and criteria of Peer reviewing

- To provide editors with information needed to reach a decision.
- To instruct authors on how to strengthen their paper to make it acceptable
- To maintain high standards of peer-reviewed journals
- To ensure research is properly verified before being published
- To improve quality of the research: rigorous review by other experts helps to refine key ideas and correct errors

2) Confidentiality

- The entire review process is strictly confidential. No one may be consulted during the review unless permission is given by the editor.
- A reason for confidentiality is that some disciplines are highly competitive and confidentiality protects new findings.

3) Timing of review

- Timely service by the journal provides valuable service to authors and scientific community.
- The time limit is given for a review ranges between 2 and 4 weeks. If more time is needed by the reviewer, permission may be requested from the editor.

4) Anonymity

- Reviewer and author names remain anonymous in PMUSER (double blind review)
- Anonymity will avoid disputes and hard feelings. More importantly it allows the reviewer to make an honest and objective review.

5) Conflict of interest or bias

- The editor should avoid choosing relatives or collaborators of the author; avoid direct



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competitors; avoid referees who the authors have excluded, or those who might profit from the work.

- Conflict of interest or bias is not always known by the editor, so the question is asked of the reviewer who will then indicate whether a conflict may be present.

6) Editing the referee's report and feedback to referee

The editor usually does not edit any comments made by the reviewer unless:

- the language is inappropriate for professional communication,
- contains confidential information,
- contains information that reveals identity of the reviewer

7) Conducting the review ... be honest but not offensive.

Read the article through; different types of articles are reviewed based on the criteria for the type of article (e.g. review article, full scientific article, abstract, note, etc.). Contact the editor for guidelines.

- Review article: Is the content substantive for a review? Is a review of the topic needed?
- Full scientific article: Does the study provide new science?
- Abstract: Is the abstract logical and understood without additional information?
- Note: similar to a full article with less scientific material. It usually highlights an interesting finding or observation.

A review is based on:

i) Structure of the manuscript (research or review article):

- Are all the key elements present and clearly laid out:

For a research article: abstract, introduction, methodology, results, discussion and conclusions.

- Does the title and abstract reflect the content of the article?

Introduction:

- Does the Intro summarize relevant research?
- Is the problem/hypothesis being investigated stated?



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Methods:

- Does the author accurately explain how the data was collected?
- Is the experimental design suitable for answering the question posed?
- Is there sufficient information present for you to replicate the research?
- Do the methods appropriately test the hypothesis? Controls?
- What statistics are used and are they appropriate?

Results:

- Are they clearly laid out and in a logical sequence and is the analysis appropriate?
 - Do the figures describe the data accurately and do they inform the reader?
 - Are the titles and legends self-explanatory without referring to the text?
 - Are the figures consistent, e.g. bars in charts are same width, scales on axes are logical, etc.
- ***Interpretation of results should not be included in this section.**

Discussion/Conclusion:

- Are the claims supported by the results, do they seem reasonable?
- Have the authors indicated how the results relate to expectations and to earlier research?
- Are the claims appropriately discussed in the context of previous literature?
- Does the conclusion explain how the research has moved the body of scientific knowledge forward?

General comments:

- If the manuscript is unacceptable in its present form, does the study seem sufficiently promising that the authors should be encouraged to consider a resubmission in the future?
- Do any portions of the paper need shortening, expanding, or rearranging?
- Is the manuscript clearly written? If not, how could it be made more clear?
- Is the manuscript type appropriate for the presented data?
- Brief Communications/Notes report significant results of immediate interest,
- Articles represent more extensive experimental studies,
- Reviews cover a broad range of topics in a focused disciplinary topic.
- Have the authors done themselves justice without overselling their claims?
...too much speculation?
- Are there any special ethical concerns - use of animals or human subjects?



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Originality:

- What are the major contributions and how significant are they?
- Is the research question/hypothesis clearly stated and revisited in the discussion?
- Are the findings novel?
- Would this paper be of interest to a reader of PMUSER?

Ethical Issues

- Plagiarism: If you suspect that an article is a substantial copy of another work, inform the editor.
- Fraud: if you suspect the results in an article to be untrue, discuss it with the editor.
- Other ethical concerns: For medical research, has confidentiality been maintained? Has there been a violation of the accepted norms in the ethical treatment of animal or human subjects? If so, then these should also be identified to the editor.

Final report of the review to the editor and the author:

To the editor: (confidential comments to the editor that the authors do not see)

- State what is the most significant contribution of this paper.
- Make a recommendation to the editor and include a summary of the most critical points supporting your recommendation.
- Reject (explain reason in report)
- Accept without revision
- Revise (either major or minor)
- Clearly identify what revision is required.

To the author:

- Quick summary of the article - serves the dual purpose of reminding the editor of the details of the report and also reassuring the author and editor that you have understood the article.
- Comments should be courteous and constructive, and should not include any personal remarks.
- Explain and support your judgment so that both editors and authors are able to fully understand the reasoning behind your comments.



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Reviewing an *abstract*:

An abstract is...“a brief representation of a larger document (research article; review paper)”

Purpose of an abstract:

- To help reader decide whether to read the text
- To summarize the findings
- To help scholars find your article

An abstract is usually

- 100-300 words
- Can stand alone
- Contains all major elements of larger articles
- Avoid repetition
- it should have no new information than is in the article
- Ideas should be linked so the information in the sentences flow and make logical sense.

Abstracts may be for:

- Research article (Topic, research question, methods, results, conclusion)
- Review article (Topic; thesis statement; review of the literature in a systematic fashion; conclusions)
- Poster presentations (sections are similar to a research article but the information in the poster is not available to the reader, so the abstract should be thorough).