
COMP496: Reviewing

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Types of Reviews

- Book reviews for publication in journals
- Conference reviewing
- Journal reviewing
- Proposal reviewing

The Purpose of Peer Review

From Wikipedia:

- Peer review (known as refereeing in some academic fields) is a process of subjecting an author's scholarly work, research or ideas to the scrutiny of others who are experts in the same field. It is used primarily by editors to select and to screen submitted manuscripts, and by funding agencies to decide the awarding of grants.

Peer Review: Key Functions

- Identify scientific errors (“technical correctness”)
- Judge originality of work
- Judge significance of work
- Comment on clarity
- The bottom line: does this work advance the state of scientific knowledge in the field?

Different Approaches to Reviewing

- Differences by field
 - anonymity of reviews and reviewers
- Differences by forum
 - journals
 - conferences
 - workshops

Rigour of Reviewing

- Published work should be correct
- However, depending on the forum, there is some flexibility in thresholds for other criteria:
 - in CS/IS, journals are most prestigious and have high thresholds
 - conferences range in prestige
 - workshops are generally fora for discussing work, or for quite specialised topics
- Quality is determined by general esteem, and estimated by metrics

Quality Estimation for Journals

- Journal Impact Factor: <http://www.sciencegateway.org/impact/>
 - The impact factor for a journal is calculated based on a three-year period, and can be considered to be the average number of times published papers are cited up to two years after publication
- Example calculation for 2008:
 - A = the number of times articles published in 2006-7 were cited in indexed journals during 2008
 - B = the number of articles, reviews, proceedings or notes published in 2006-7
 - Impact factor 2008 = A/B
- In Australia, the ranking of journals is currently underway for the ERA

Conferences

- Typically, quality metrics related to acceptance rate
 - <25% is quite tough
- In Australia, CORE has determined conference ranking
 - <http://www.core.edu.au/>
 - Rankings: A+, A, B, C, unranked

Things to Look for When Reviewing:

#1 Organisation

The answers to the following questions should be easy to determine:

1. What do the researchers want to find out?
2. Why is that important to investigate or understand?
3. How are the researchers investigating this?
4. What do they claim to have found out? Are the findings clearly stated?
5. How does this advance knowledge in the field?
6. How well do the researchers place their findings within the context of ongoing scholarly inquiry about this topic?

Things to Look for When Reviewing:

#2 Literature Review

- Do the authors present a convincing line of argument here—or are they just name-dropping without a clear underlying logic for how the cited work may be important)?
- Do the authors focus on ideas rather than just specific facts?
- Do they give sufficient attention to theory--the cumulative attempts at prior explanations for the questions they are investigating?
- Do the research questions or hypotheses clearly follow from the theory and the literature review?
- In short: How well do the authors set the stage for the research problem they are reporting?

Things to Look for When Reviewing:

#3 Methods and Procedure

- Do the authors clearly describe their research strategies?
- Are their choices of methods adequate to find out what they want to find out in this study?
- Would other methods provide a substantial improvement; if so, would employing these methods be feasible or practical?
- Do they provide some justification for the methods they have chosen? Does this appear to be adequate?

Things to Look for When Reviewing:

#4 Presentation of Results

- Does the results section tell a story, taking the reader from the research questions posed earlier to their answers in the data?
- Are the tables and figures clear and succinct? Should there be additional explanatory information provided?
- Do the authors present too many tables or figures in the form of undigested findings?
- Are the results presented both statistically and substantively meaningful? Have the authors stayed within the bounds of the results their data will support?

Things to Look for When Reviewing: #5 Discussion

- Do the authors present a concise and accurate summary of their major findings?
- Do they attempt to integrate these findings in the context of a broader scholarly debate about these issues? Do they integrate their findings with the research literature they presented earlier?
- Have they gone beyond presenting facts--data—and made an effort to present explanations--understanding?
- Have they responded to the conceptual or theoretical problems that were raised in the introduction?
- Do they thoughtfully address the limitations of their study?

Things to Look for When Reviewing:

#6 Writing Style

- Is the writing clear? Have they avoided jargon that would interfere with the communication of their procedures or ideas?
- Is the writing concise? Are too many words or paragraphs or sections used to present what could be communicated more simply?
- Is the writing grammatically and stylistically correct?

Proving an Overall Assessment

- Should this paper be rejected for this journal or conference?
- If it's for a journal, does it show sufficient promise for revision, in ways that you have clearly demonstrated in your review, to encourage the authors to invest weeks and months in revision?
- Remember that only a few of the articles submitted to a journal will result in publication.
- Your final verdict should be only provided for the editor or program chair, NOT for the author.

Good Reviews and Bad Reviews

- A good review is supportive, constructive, thoughtful, and fair.
 - It identifies both strengths and weaknesses, and offers concrete suggestions for improvements.
 - It acknowledges the reviewer's biases where appropriate, and justifies the reviewer's conclusions.
- A bad review is superficial, nasty, petty, self-serving, or arrogant.
 - It indulges the reviewer's biases with no justification.
 - It focuses exclusively on weaknesses and offers no specific suggestions for improvement.

For Next Week

- You will be sent three papers by a colleague in this class
- You will be provided with a review form
- You should write a review of each paper as if it was being prepared for a state-of-the-art survey of research in the Division to be published externally
- Reviewing will be done anonymously
- You can only 'accept' one of the three papers for 'publication': hard decisions need to be made!