



Responsible Conduct of Research, Scholarship, and Creative Activities

Peer Review

Responsible Conduct of Research, Scholarship, and Creative Activities
Michigan State University Graduate School, 2010 <http://grad.msu.edu/>

The Graduate School
Michigan State University
© 2010

Permission is granted to use or modify this presentation to support education about the responsible conduct of research, scholarship, and creative activities. Users are expected to cite this source.

Responsible Conduct of Research, Scholarship, and Creative Activities
Michigan State University Graduate School, 2010 <http://grad.msu.edu/>



Objectives

- Define “peer review” in your own words
- What is meant by a “refereed” journal?
- Consider a scenario in which you are judging manuscripts submitted to an undergraduate research contest in your discipline. Explain how you would apply the principles of fairness, confidentiality, and speed.

Responsible Conduct of Research, Scholarship, and Creative Activities
Michigan State University Graduate School, 2010 <http://grad.msu.edu/>

What is Peer Review?

“Peer review (also known as refereeing) is the process of subjecting an author's scholarly work, research, or ideas to the scrutiny of others who are experts in the same field.”

http://en.wikipedia.org/wiki/peer_review

Peer review

- Helps establish the quality of the research and manuscript – it is judged by experts
- Contributes to fair editorial decisions about what does and does not get published

Responsible Conduct of Research, Scholarship, and Creative Activities
Michigan State University Graduate School, 2010 <http://grad.msu.edu/>

Referee is another term for peer reviewer.

A journal is called a “refereed” journal when manuscripts are subject to peer review prior to publication.

A manuscript is called “refereed” when it has been approved by peer review.



Uses of Peer Review

- Guidance committee determination whether a thesis or dissertation satisfies degree requirements
- Editorial board decisions about which manuscripts should be published in a professional journal, as a chapter, or as a book
- Funding agency decisions about which research proposals should be funded
- Committee decisions about which submitted papers should be accepted for presentation at a conference
- Judges' decisions about the quality of art work, music, or literature submitted to a competition or show

Responsible Conduct of Research, Scholarship, and Creative Activities
Michigan State University Graduate School, 2010 <http://grad.msu.edu/>

Ethical Principles for Reviewing

- Fairness – The reviewer must make every effort to provide an objective and impartial review
- Confidentiality – The reviewer may not use ideas from the manuscript until it is published, and then only with an appropriate reference citation
- Speed – Out of courtesy to the authors and respect for the scientific community, the reviewer should complete the review within a reasonable amount of time

Responsible Conduct of Research, Scholarship, and Creative Activities
Michigan State University Graduate School, 2010 <http://grad.msu.edu/>

Fairness – The reviewer must make every effort to provide an objective and impartial review.

- “Blind” or “masked” reviews help to insure impartiality.
 - In a “blind” review, the reviewer does not know the identity of the author. In this case, reviewers receive a copy of the manuscript with the author’s name and contact information removed. In a “double-blind” review, the reviewer does not know the identity of the author and the author does not know the name of the reviewer.
 - It is unlikely that either the author or reviewer is completely anonymous. Reviewers are selected on the basis of their expertise and familiarity with the field of study, thus they often know or can guess which research group has submitted the manuscript under consideration. When they submit manuscripts, authors are likely to know the identity of editorial board members, thus they may be able to guess the identity of a peer reviewer. Nonetheless, all parties are obligated to be as professional and impartial as possible with respect to manuscript reviews.
- Reviewers should recuse themselves in situations where they have conflicts of interest such as financial interests related to the research under review, personal or scientific beliefs that may lead to a biased review, or close ties to the authors (e.g., former student) that may lead to a biased review.

Confidentiality – The reviewer may not use ideas from the manuscript until it is published. Similarly, the reviewer may not reveal information about the identity of the authors or the nature of the research until the manuscript is published. A proper reference citation must be used after the manuscript is published.

Speed – Out of courtesy to the authors and respect for the scientific community, the reviewer should complete the review within a reasonable amount of time.

Conflicts of Interest

- Reviewers may face conflicts of interests such as:
 - Reviewing grants and publications submitted by close colleagues, students, and supervisors
 - Making decisions based upon strong personal views or strong moral convictions rather than scientific evidence
- A reviewer with a conflict of interest should report the conflict to the editor and consider withdrawing from the review task
- The editor should manage the conflict by some combination of assigning an additional reviewer, asking the reviewer with a conflict to withdraw, and closely supervising the review process

Responsible Conduct of Research, Scholarship, and Creative Activities
Michigan State University Graduate School, 2010 <http://grad.msu.edu/>

The examples of conflicts of interest are quoted or paraphrased from *ORI Introduction to the Responsible Conduct of Research*, <http://ori.dhhs.gov/education/products/RCRintro/>

Example: NSF Conflict-of-Interests and Confidentiality Statement for NSF Panelists

“Your designation as an NSF panelist requires that you be aware of potential conflict situations that may arise. Read the examples of potentially biasing affiliations or relationships listed on the second page or back of this form. As an NSF panelist, you will be asked to review applicant grant proposals. You might have a conflict with one or more. Should any conflict arise during your term, you must bring the matter to the attention of the NSF program officer who asked you to serve as a panelist.”

National Science Foundation,
www.nsf.gov/attachments/108234/public/coi_1230P.doc

Responsible Conduct of Research, Scholarship, and Creative Activities
Michigan State University Graduate School, 2010 <http://grad.msu.edu/>

The following information is quoted or paraphrased from www.nsf.gov/attachments/108234/public/coi_1230P.doc.

Potentially biasing affiliations or relationships that must be reported to the NSF program officer

- Affiliation with an institution that has submitted an application for funding (e.g., current/previous/future employment, office or membership on a governing board, current enrollment as a student)
- Relationship with an investigator, project director, or other person who has a personal interest in the proposal or other application (e.g., family relationship, business or professional partnership, past/present mentor/trainee relationship, collaboration on a project or publication within the last 48 months, co-editing of a journal or other publication within the last 24 months)
- Other affiliations or relationships (e.g., close personal friendship, relationships of immediate family members with an investigator, project director, etc.)

Conflicts of interest that disqualify a person from service as a panelist

- Financial interests in the outcome of a funding proposal, including financial interests held by your spouse, minor child, or business partner, as well as by organizations with which you are affiliated or arranging/negotiating for future employment
- Other relationships, including funding proposals submitted by a close relative or recent former employer

Misuse of position as a panelist

- Disclosing information from grant proposals not generally available to the public
- Using your NSF office or title for private gain
- Representing another party before any Federal Government official if you have participated in that same matter as a panelist
- Performing work for NSF on more than 60 days in any 365-day period
- Accepting gifts offered to you because of your NSF position
- While working for NSF, accepting employment with any foreign government or any gift from a foreign government or international organization worth more than \$285
- Serving as an agent of a foreign principal, as defined in the Foreign Agents Registration Act

Typical Journal Review Process

#	Step in Review Process
1	Author submits manuscript to editorial office
2	Manuscript is logged-in and assigned to two or three reviewers
3	Reviewers are asked to complete the review within one month
4	Editor compiles the reviews and makes a decision whether to accept, accept with required revisions, send to additional reviewers, or reject
5	Editorial decision is communicated to the author
6	Author revises paper if editorial decision was to accept with required revisions

Responsible Conduct of Research, Scholarship, and Creative Activities
Michigan State University Graduate School, 2010 <http://grad.msu.edu/>

Reviewers are typically asked to comment on:

- The importance of the topic, the rationale for the study, and the contribution to the knowledge base
- The theoretical positions and the adequacy of the literature review
- The quality of the experimental methods and statistical treatment of the data
- The match of the results to the discussion
- The quality of writing – organization/writing style, grammatical constructions, spelling, reference citations, and style requirements

Typical Journal Review Process

#	Step in Review Process
7	For minor revisions, the editor determines whether revisions are adequate. For major revisions, reviewers are consulted again.
8	When the manuscript is accepted, the editorial office prepares a “galley copy” which shows the appearance of the manuscript as it will be published.
9	Galley copy is sent to the author for proof-reading.
10	Editorial office negotiates a copyright agreement with the author.
11	Article is published (typical time from submission to publication is 4-6 months).

Responsible Conduct of Research, Scholarship, and Creative Activities
Michigan State University Graduate School, 2010 <http://grad.msu.edu/>

Reviewers are typically asked to comment on:

- The importance of the topic, the rationale for the study, and the contribution to the knowledge base
- The theoretical positions and the adequacy of the literature review
- The quality of the experimental methods and statistical treatment of the data
- The match of the results to the discussion
- The quality of writing – organization/writing style, grammatical constructions, spelling, reference citations, and style requirements

Becoming a Reviewer

Most scholars have a goal of developing a national or international reputation for expertise in the discipline. Service as a reviewer contributes to that goal.

- Learn to review
 - Ask your mentor about how s/he does reviews
 - Attend educational sessions about reviewing
- Inform journal editors that you are interested in reviewing – either ask your mentor to nominate you or volunteer
- Do your best work as a reviewer and as a researcher – your work will be noticed by the leaders in your field

Responsible Conduct of Research, Scholarship, and Creative Activities
Michigan State University Graduate School, 2010 <http://grad.msu.edu/>

Some journal editors will approve a situation in which graduate students or post-doctoral fellows assist or “shadow” their mentors with journal article reviews as a means of learning how to review. Always check with the journal editor first. As a best practice, your mentor (or the editor) should insist that you sign a confidentiality agreement indicating that you will not share information about the manuscript with others. In addition, the editor may insist upon seeing a copy of your curriculum vita and asking you to complete a training/tutorial exercise before assisting with a review.

Often when you start working with a journal, you will be asked to do easier review tasks such as book reviews, news digests, etc. The next step usually involves serving as an occasional reviewer for manuscripts that are squarely within your areas of expertise. After establishing a positive record of quality reviews and work ethic for completing reviews, you may be promoted to the journal editorial board, and eventually perhaps the Editor-in-Chief position. The most important additional criterion for becoming a reviewer and being promoted to increasingly responsible roles is the quality and quantity of your own research. Editors and publishers want reviewers who understand and do terrific research.

Sources

- U.S. Department of Health and Human Services. (n.d.), *Peer Review Policies & Practices*, retrieved 11/7/09 from <http://grants1.nih.gov/grants/peer/#guidelines>
- Sara Rockwell. (n.d.). *Ethics of Peer Review: A Guide for Manuscript Reviewers*, retrieved 11/7/09 from <http://ori.dhhs.gov/education/products/yale/prethics.pdf>

Responsible Conduct of Research, Scholarship, and Creative Activities
Michigan State University Graduate School, 2010 <http://grad.msu.edu/>