PEER REVIEW

9.1 PEER REVIEW

Background

The term “peer review” is used here to describe the impartial and independent assessment of research by fellow colleagues or others working in the same or related field. Peer review has a number of important roles in research and research management. This includes the assessment of grant applications, the selection of materials for publications, the review of performance or researchers and teams, and the selection of staff.

Institutions should encourage participation of peer review process as it provides expert scrutiny of a project and help to maintain high standards and encourage accurate, thorough and credible research reporting.

Peer review on its own cannot ensure research integrity. However, peer review has been important in detecting fabrication and fraud in research.

Responsibilities of Institutions

Encourage participation in peer review

The importance of the peer review process, encouragement and support of researchers to participate should be recognized by the institution.

Responsibilities of peer reviews

It is important that reviewers/participants in peer review:

- Are unbiased and timely in their review
- Act in confidence and do not divulge the content or outcome of any process for which they are involved
- Declare all conflicts of interests. Do not permit personal prejudice to influence the peer review process, and do not introduce considerations that are irrelevant to the review criteria
- Do not take calculated or undue advantage of knowledge gained during the peer review process
- Ensure that the criteria to be applied to are informed and complied with
- Do not agree to engage in peer review outside their area of expertise
- Give proper consideration to research which challenges or changes accepted ways of thinking.

Responsibilities of Researchers

a) Do not interfere during the peer review process
Researchers whose work is undergoing peer review must not seek to influence the process or outcome.

b) Participate in peer review
Researchers whose research is being funded, have a responsibility to participate in peer review process.

c) Mentor trainees in peer review
Supervising researchers have a responsibility to guide trainee researchers to develop the necessary skills for peer review and understand their obligation to participate.

d) Declare conflicts of interest
Relevant conflicts of interest must be declared by peer reviewers.

Reviewing the work of others

Peer review is recognized to be central to the current mechanism of research assessment. Researchers should exercise judgment in taking part in peer review and should declare all relevant interests they have in the field as required. Those invited to review for the first time are advised to take any training that might be offered, follow the guidance provided by the organization making the request, acquaint themselves with good practice and consult/discuss with their mentor and/or colleague as appropriate. Where appropriate, reviewers should contribute comments that will be attributed. Those taking part in peer review should:

- Apply rigorous objectivity in all assessments;
- Review in accordance with the guidance provided for the process, complete the review as specified and on time;
- Respect the confidentiality of any information sent for review and not disclose any information provided, any opinions given, or the details of the invitation to review;
- Report any conflicting interests as required by the requesting organization and Institution's policy;
- Do not allow vested interests or personal bias to influence their impartial assessment of work to be reviewed in either a positive or negative way;
- Only accept assignments for which they have the expertise, returning any which are outside their expert knowledge;
- Do not take advantage of any new data or privileged information they have had access to during the review process either in the capture of ideas to further their own research and/or activities;
- Conduct a fair assessment of the work and not deliberately disadvantage a competitor in the field;

- Review objectively work that challenges accepted views, crosses traditional boundaries and/or is wholly innovative;
- Be aware that the review may identify practice which falls below good conduct (which might be a genuine error or malpractice) and which should be reported as concerns.

Submitting work for review

Researchers should not take actions, directly or indirectly, to influence the review of their own work or that of others, positively or negatively. Where work is reviewed the authors usually respond to reviewer comments. Authors should accept comments and respond to the factual points made. Where an author suspects an infringement of the principles outlined above this should be reported to the appropriate authority (e.g. journal editor, grant manager). Where an author considers there might be reasonable grounds for appeal he or she should first discuss the details with colleagues within the Institution.

9.2 POTENTIAL PROBLEMS IN THE PEER REVIEW SYSTEM

Peer Reviewer Issues

Although peer review has been an accepted practice for more than 200 years, it has also been the subject of criticism. For example:

- Reviewers may have biases which they do not recognize or fail to consider and disclose when they review a grant application or paper. Such biases can include:
  - Dislike for an author's or applicant's institution;
  - Personal likes or dislikes of the author or applicant;
  - Competition with the author or grant applicant.
- Peer review might restrict controversial or innovative research from being considered for publication or being used as the basis for a grant application.
- Peer reviewers may fail to disclose financial or other conflicts of interest that might affect the objectivity of their review.
- Persons asked to act as reviewers may not admit their lack of expertise in the research area addressed in the paper or grant application.
- The peer-review process is not sufficiently reliable in detecting errors.
- Peer review does not prevent poor quality papers from getting published. For example, a manuscript might be rejected by one journal, but a persistent author might get it published in another.

Peer Review Benefits Outweigh the Costs

Scholars acknowledge problems with the peer review system, but generally believe that the merits outweigh the drawbacks. Peer review often improves the quality of the research presented in a manuscript or grant application. It is not always clear, however, whether the editors, reviewers, or authors are primarily responsible for the improvement. Two alternatives to peer review are first, leaving publication decisions to editors; or second, allowing government grant-awarding agencies to determine who is awarded grants without separate independent review. A third option, of course, is allowing publication of almost anything without distinguishing between quality and nonsense. Surely none of these alternatives would be an improvement.

The key to improving peer review is an awareness of the problems inherent in the process, such as the potential for bias or the misappropriation of information. Such an understanding of possible abuses can help researchers avoid falling victim to ethical lapses by reviewers. Until another method is developed, peer review remains the best way for experts to assess the quality of research being considered for funding or publication.
Those who perform reviews with competence and integrity are fulfilling their obligations to the scholarly community. Honest, capable reviewers uphold accepted standards when they reject work and improve the field by offering constructive criticism. If an author believes that a manuscript has been rejected unfairly, he or she can express those concerns to the editor.

The reviewer does not necessarily have the final say. Appeals are built into the grant-application process. For example, an author or grant applicant (or anyone else with knowledge of the review process) may believe that a reviewer has misappropriated or otherwise improperly used the author's or applicant work. The injured party can seek legal representation and petition the reviewer's institution to initiate an investigation of plagiarism. Advising the granting agency or the journal might also be appropriate. Although it is ethical for a reviewer to use confidential information to modify the direction of the reviewer's own research, if the new information clearly shows that the reviewer's research is headed in the wrong direction, the reviewer must do so with care and integrity. The appropriate approach would be to explain the situation to the author applicant, and attempt to establish collaboration.

Up the Process of Peer Review

Instead of the traditional peer review system, modifications which have been introduced are:

a) Blinded Review

Some suggest a need to "blind" reviewers to the identities of both the author of a manuscript being reviewed and the author's institution. Blinded peer review can remove bias which might result from a reviewer's knowing whose work he is

reviewing and the author's institution. In principle, blinded reviews might be of higher quality, because it allows reviewers to focus on the substance of the research question and conduct rigorous and impartial critique of the work.

b) Open Review

It has been observed that accountability would be enhanced if authors and reviewers know each other's identities, because reviewers would be less inclined to seek unjustified arguments or to misappropriate data- as they are under the guise of anonymity. Some argue that open reviews, in which the author knows the reviewer and the reviewer knows the author, would improve the peer-review process.

9.3 REFERENCES & ACKNOWLEDGEMENT: PEER REVIEW

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