Decoding the Peer Review Process

Guide to Understand the Concepts and Terminologies Associated with Academic Peer Review

Dear Reader,

Peer review is an important part of scholarly publishing. However, in recent times the concept of peer review is undergoing a drastic change with publishers experimenting with new innovative models as an alternative to the traditional models of peer review.

Through this ebook we would like to provide a brief understanding of the peer review process and the various types that currently exist. We will also discuss how the quality of peer review itself can be evaluated and the various problems that exist in peer review.

We hope that this ebook simplifies and gives you a better understanding of the peer review process. You can also visit enago.com/academy for further help.

Happy reading!

Regards,
The Enago Academy Team

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Index

What is Peer Review?

Peer review is a process wherein an expert evaluates the quality of work of other researchers. The aim of this process is to ensure that the work done is rigorous, coherent, and adds significant new knowledge to what is already known.

Peer review is usually applied to scholarly articles submitted to journals, or conferences, and grant applications. The stringency of the peer review is directly proportional to the prestige of the journal, conference, or grant [1].

The person reviewing the work would be an expert in that particular area of research and would therefore be the author's professional peer, hence the term peer review [2].

Peer review also helps authors to improve the quality of their work through implementation of the critical feedback they receive from the peer reviewer.

Traditional Peer Review Process

Traditionally, peer review has been a closed process, wherein, the author is unaware of who has reviewed the paper and the reviewer is unaware of the author of the paper they are reviewing. This review usually takes place after an author has submitted a manuscript to a journal and the manuscript clears the initial editorial screening.

However, with changing times, the peer review process is also undergoing several changes. There are several new and emerging models of peer review that are being implemented. Some of these models include pre-submission peer review, post-publication peer review, collaborative peer review, transferable peer review, portable peer review etc.

In the subsequent section, we will be discussing some of these models in detail.

Types of Peer Review

Single Blind Peer Review

In a single blind peer review the reviewer is anonymous, however the identity and the affiliation of the author is known to the reviewer.

The reviewer can freely give an honest critical opinion without any pressure from the author or fear of offending anyone. However, considering that the identity of the author is disclosed to the reviewer, he/she may be subjected to bias based on gender, ethnicity, institution etc. [3].

Double Blind Peer Review

In a double blind peer review the identity of both the author as well as the reviewer is not disclosed.

Although a possible benefit of this approach would be an unbiased review, it may be difficult to hide the identity of the author due to the nature of work, writing style etc. [4].

In a survey conducted by Nature, they found that when authors opted for a double blind review only 25% of papers were accepted, versus 44% who opted for the single-blind route [5].

Open Peer Review

Open peer review can have several meanings, such as it can involve the identity of both the author and the reviewer being disclosed. It can also involve the reviewers report being published along with the article or readers being able to contribute to the review process etc.[6].

However, reviewers may be hesitant to criticize the work of senior researchers and also have concerns about being associated with a negative review [7].

Transferable/Portable Peer Review

In certain cases, if a manuscript is not suitable for publication in a journal it has been submitted to, but is however appropriate to be published in another journal, either from the same or different publication house, the authors have the option to transfer the manuscript together with the reviewer reports to the other journal.

This facility is at the discretion of the journal the manuscript has been submitted to. In some cases, this transfer can eliminate the need for further 're-review' by the new journal [8].

Collaborative Peer Review

Collaborative peer review is a model wherein the editors and the peer reviewers can discuss their opinions about the manuscript during the review process between themselves or also with the author.

This can be done through platforms such as Mendeley and identities can be kept anonymous. Several journals have experimented with this model, and it has received a positive and encouraging response [9].

Semi-Automated Peer Review

This involves using text mining to automate some aspects of the peer review process. This can help referees and editors make a more accurate decision. These softwares can automatically review the statistical and reporting integrity of the manuscripts and check them against common reporting guidelines.

This approach does not intend to replace the manual peer review process, but aims to facilitate a more transparent peer review [10].

Pre-Submission Peer Review

A pre-submission peer review is an informal review that an author requests a trusted colleague to conduct in order to obtain a frank and constructive feedback before sending their manuscript to a journal for publication [11]. This helps to improve the quality of the manuscript before submission. Service providers like Enago (https://www.enago.com/publication-support-services/) also offer pre-submission peer review as part of their publication support packages.

Post-Publication Peer Review

This model allows the appraisal and revision of a paper even after publication. This can be in the form of a comments page or a discussion alongside the published paper.

Usually, this process does not exclude other forms of peer review and is an addition to the existing pre-publication peer review processes [12].

This model has the benefit of receiving critical feedback from several renowned researchers rather that being restricted to feedback from just 2-3 researchers through the traditional peer review approach.

Quality of Peer Review

Peer Review Evaluation (PRE)

Peer Review Evaluation (PRE) is a system for evaluating and rating the peer review quality of individual papers and the journals that publish them. It is owned by STRIATUS/JBJS, Inc., publisher of The Journal of Bone & Joint Surgery. It is like a quality score that a journal can display to show that its peer review is up to the mark.

Journals that want a PRE certification have to sign up for it with a fee. They have to further provide information about their review process such as- the number of peer review rounds that the article goes through, the participants of the review process (e.g., reviewer, associate editor, editor), who were the reviewer, what were the comments received.

A score indicating the quality of the review process is presumably assigned with the assistance of a live person by the programme [13].

Transparency in Peer Review

In order to bring greater transparency to the research process and recognition to the work of peer reviewers, Wiley-a publishing company, Publons- a website that enables academics to track, verify, and showcase their peer review and editorial contributions to academic journals and ScholarOne Manuscripts- a manuscript submission platform recently announced the launch of a new, integrated transparent peer review program.

This program enables open publication of an article's entire peer review process including the initial review, revision, and final decision. A comprehensive peer review history will now be made available alongside the published article.

Each step of the peer review process will be assigned a digital object identifier (DOI), enabling future authors to easily reference and cite relevant peer reviewed content.

However, authors have the option to decline transparent peer review and reviewers have the option to remain anonymous [12].

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Thank you for reading this ebook.

We hope you now have a better understanding of the

current status of the peer review process

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