

What is Peer Review?

Scholarly peer review is the process of evaluation of scientific, academic, or professional work by others working in the same field. The process is designed to ensure that academic publications make substantial contributions to the state of knowledge about a subject and meet minimum standards of reliability.

Fundamentals

Is it worth it to do the extra work to find peer reviewed sources?

When researching, it is important to look at articles recently published in top tier peer reviewed or refereed journals to understand the current issues and developments of a topic.

How can I tell if an article is peer reviewed?

Follow these steps:

- Check the *UlrichsWeb* database for the journal (is it refereed, is the content type listed as **academic/scholarly**).
- If the journal is not in *UlrichsWeb*, try googling it. On the publisher's website, look for the **About** page or submission guidelines. These pages will usually explicitly say whether a journal is peer reviewed or refereed and often will describe the process.

Keep in Mind

Many scholarly journals only peer review original research. The standards of peer review for editorials, literature review/survey articles, and book reviews may be less stringent (or non-existent) even if they are published in refereed journals.

The Process

What is "blind" peer review?

Usually the refereeing process involves what is called "blind" peer review. This is when the reviewers do not know who wrote the article they are reviewing. This encourages reviewers to evaluate the sources according to the norms of their community rather than the reputation of the author.

What happens if the article is not accepted for publication?

The author can make revisions, based on the feedback from the reviewers, before resubmitting or submitting to another journal.

Keep in Mind

Different journals have different acceptance rates. Many top tier journals reject most submissions and suggest resubmissions with revisions to only a small number of high-quality submissions. Of course, sometimes articles are accepted without revision.

What is Peer Review?

The Reviewers/Referees

How are they selected?

Reviewers or referees are selected by an editor or editorial board on the basis of their expertise and reputations. This work is generally an unpaid service scholars do for their academic communities.

What do they look for when reviewing?

While there are significant disciplinary differences in the peer review process, reviewers generally confirm that an article does the following:

- Adheres to the norms of the discipline or field
- Makes a substantial contribution to the scholarly knowledge about a topic
- Engages to relevant scholarly literature in a meaningful way
- Appears to be methodologically or theoretically sound

Keep in Mind

The quality of peer reviewers can vary considerably from one publication to another. Generally, leading journals will be reviewed by qualified experts, but some journals have a hard time finding qualified reviewers.

The Method

Is the peer review process a fool-proof method for ensuring reliable and credible results?

No. Referees rarely replicate the experiment or study, due to the material expense and effort involved in replication. Instead they look at the methods and evidence to ensure that the research design makes sense and follows the best practices or norms of the field. Occasionally this means that erroneous or fraudulent data are published in scholarly journals.

Moreover, sometimes the analysis or inferences drawn from the evidence may be suspect, biased, or faulty. In addition, even good scholarly articles often represent a relatively narrow perspective on a topic.

Finally, it is well-established that there is a correlation between funding and research outcomes in published scholarly work, especially in medicine. Besides the remote but present possibility of academic dishonesty or malfeasance, a variety of mechanisms may account for this correlation.

Keep in Mind

The peer review process is an important tool in determining reliability of a source, but it should not replace your own critical eye as a researcher or your ability to contextualized sources.

What is Peer Review?

Quality and Reputability

Will every high quality article make it through the peer review process?

No. When an article uses innovative methods, has findings that differ significantly from the prevailing consensus or norms, asks a question that has not previously been asked (or which is not currently considered important), or requires understanding of more than one field, referees may not recognize its value. In the history of almost every scholarly field, there are examples of findings, methods, theories, or questions that were initially ignored or rejected, but later became the scholarly consensus.

Are journals with a high acceptance rate disreputable?

Not necessarily. Many top-tiered journals have extremely low acceptance rates, but many “open access” journals have high acceptance rates. For instance, *Nature* and *Science* have very low acceptance rates, while *PLOS One* has a high acceptance rate. However, all three journals are very important in the hard sciences.

Keep in Mind

A high acceptance rate may signal disrepute, but it may also indicate a different philosophy about scholarly gatekeeping. According to this philosophy, the number of citations to – and comments on – an article are better measures of quality than the ability of reviewers to assess importance before publication.

The identification of high quality research is always fraught and sometimes mistakes are made. Even so, the peer review process remains one of the most important institutions for vetting scholarship.