

How to Write a Review Article

The process of academic writing should not be molded from technical clichés or reduced to a list of tips and tricks in targeting an easy publication. This brief contribution does not impose some strict rules on the scholarly publications but rather assists the prospective authors in preparing and improving their review articles in a way that is deemed beneficial to a wide academic audience. Note that the adjectives “academic” and “scholarly” used above are synonyms and can be used interchangeably, thus indicating that submitted manuscripts would be a subject of peer review.

Review articles of good quality are frequently needed in the presence of the growing number of research papers. A review article is expected to provide a summary and/or a synthesis of the findings of selected research contributions being published by other authors. The main purpose of a review article is to examine the current state of the relevant publications on a given topic and to initiate a discussion about the research methodologies and the findings related to the said topic. Therefore, a review article should contain a comprehensive list of supporting references being thoroughly cited in the text.

The structure of a review article may differ from the structure of a regular paper due to the optional omission of some basic sections such as: Introduction, Analytic Model, Materials and Methods, Results, or Discussion. Sometimes it is difficult to classify a paper submission as a review article, a regular paper, or just a comment after noticing the combined use of an extensive literature review, original research contributions, and specific comments concerning only a few cited papers. Then the authors may receive review reports on case by case basis suggesting a modification of the script or its eventual separation into at least two contributions. Although there is no strict limitation concerning the review topics, it is preferable that even narrow focused contributions are being written from a more general perspective which would only benefit the authors with an eventual increase of the number of citations referring to their articles.

It is recommended that the publication type: Review/Overview, Critical Review, etc..., should appear in both the title and the abstract of the article. A brief description of some of the publication types is provided below.

Review (Overview) Articles

Review articles can be loosely classified into two basic types, non-systematic and systematic ones. The non-systematic type may include a selection of a wide range of technical results related to a chosen topic which reflects the professional experiences and interests of the authors. The quality of such papers depends on the competency and the sincere efforts of the authors to provide a good review of the subject matter. The systematic type requires an advanced preparation and relies on a specific methodology being chosen in advance, where selected foundation studies are being analyzed in connection to a long-standing problem statement.

Despite the various levels of complexity of the technical topics, the review articles are limited in including analytical and experimental parts from cited papers. The amount of text should be well balanced with the number of figures so that the addressed issues are clearly stated in a simple and efficient way. The real challenge here is in transforming a collection of technical information into a coherent script which provides an alternative point of view on previously unknown or not well understood relations among distinct studies. One should seek a proper balance between the levels of differentiation and integration of different aspects of technical information as well as between the statistical analysis of experimental data and its theoretical interpretation, etc. The review articles have to provide forums for further discussions about the problem statements and not just summarize the peculiarities of each cited paper but rather transform the presented information into an inspirational material for future studies.

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Critical Reviews

The critical reviews supposedly analyze the strengths, weaknesses, and open questions of a research paper after studying its problem statement and scientific content. The critical reviews should properly describe, then analyze and finally discuss the research findings which would hopefully result in a critical evaluation and a resultant constructive interpretation of the selected paper.

The critical reviews must be based on verifiable scientific facts, logic and reasoning but not on inconclusive arguments or personal interest. The technical criticism should be presented with a scholarly level of tolerance and understanding. Open-minded approach is recommended for the prevention of plain debunking.

Article Reviews

The article review is based on the choice of a single publication on technology and its fair evaluation. The following preparatory sequence can be used as a rule of thumb: read carefully the chosen article, list the technical issues of concern, prepare a draft version, consult with colleagues, perform at least one revision prior to submission.

Surveys

The surveys are useful and successful if they address an important technological topic being at the focus of a large part of the scientific community and the authors have in depth understanding on the field of research as well as a full access to all the relevant materials to be cited. Surveys usually contain an extensive literature review and a lot of technical details concerning different aspects of the scientific investigation. A literature review may cite a multitude of journal papers, books, theses/dissertations, conference proceedings, etc. However, such a literature review alone does not produce an entire survey which is actually quite a sophisticated script.

Historical Articles

Manuscripts on the history of technology and technology management are also invited for publication provided that the historical details and their interpretation are original and not previously published elsewhere.

Book Reviews

A book review may address one particular book or a series of books devoted to technology. It is preferable to reduce the analytical and graphical content and concentrate on the discussion about the valuable information which can be derived from the book chapters. In case of a research monograph, where distinct chapters are written by different authors, elaborate on both the self-consistency and the overall writing style.

Strategic Technical Reviews

As technology and management science become increasingly interrelated, the strategic reviews are having their specific niche among the scholarly articles. Strategic technical reviews analyze the long-term technical advances of global, regional, or corporate technological issues.

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