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TAPPI Journal Editorial Board

Critical literature reviews in open source journals

We stand on the shoulders of giants” is a famous metaphor used by Sir Isaac Newton. This testifies to the fact that new information or discoveries are built on understanding and analyzing earlier information. Particularly in science, technology, engineering, and math (STEM) fields, it is important to have thorough analysis of earlier research activities in a particular field to propose a new direction of research, to evolve new ideas, and to develop new test methods and standards. It is a mandatory and required aspect of every original research paper to have a Literature Review section in the introductory part of the paper.

Advantages of reviews

As alluded to before, a literature review involving a prior article search is the foundation upon which a new R&D infrastructure is built. Such an endeavor yields manifold benefits. Researchers and readers of a published work get a clear understanding of the field and the level of existing knowledge and can gauge the need for a new direction and research. There is hardly any peer-reviewed journal in which papers get accepted without discussions on earlier research as introductory material. Earlier research and inventions also play important roles in grant funding and patent approvals. Prior article reviews are used to identify new invention claims and steer research in new directions.

Publication of critical reviews as a strategy

A critical literature review paper is a type of research paper that analyzes and evaluates many previous papers on a specific topic. Writing and publishing a critical review paper that is peer-reviewed not only showcases one's research productivity, it also serves as a service to the professional field. As many journals have page limitations, it becomes an arduous task to perform an extensive search and write a brief summary on prior articles when writing an original research paper, while keeping within stipulated page requirements. In the publishing domain, refer-

ring to papers published in the past decade, along with citing classical papers in that subject matter, is normally practiced, and even this exercise is a tall order. Particularly in fast-moving fields such as nanomaterials, sustainability, advanced chemicals, and functional materials, the field grows exponentially, and hence output of new information is also voluminous. An easy option for researchers is to look for a critical review paper that summarizes the particular subject matter and cite it; such an activity will provide much needed room to discuss in detail the most recent research in the field, such as that published within the past three to five years.

Research reviews: Win-win solution

As critical literature review papers focus solely on reviewing earlier research and prior articles, it makes it possible to recognize many research peers by referencing their research. Young and upcoming researchers will benefit the most, as they can enlarge their network by gaining the attention of established peers in the field. This is particularly helpful in writing proposals to federal grant agencies such as the National Science Foundation (NSF), National Institutes of Health (NIH), and the United States Department of Agriculture (USDA).

Furthermore, as researchers tend to cite review papers in their research papers, citation numbers will increase. Not only this is beneficial to authors, but also to the journal that publishes such papers by enhancing their impact factors. This leads to a positive ripple effect and will attract more authors to look at such journals for publication.

Personally, I can vouch for such an effort, which has resulted in a positive out. Our review paper on nanofiber [1] has received over 2170 citations according to Google Scholar. To emphasize again the positive outcome, Professor Seeram Ramakrishna of the National University of Singapore, who is recognized as one of the world's most highly cited researchers, has several highly cited review papers [2].

Reviews in open source

As previously mentioned, review papers achieve excellent citation numbers, and if they are published in an Open Source/Open Access journal, citations will grow exponentially, as the papers are easily accessible. Journals like *TAPPI Journal* are especially well suited, particularly as there is no cost to the authors, as well as readers, in our case. Additionally, if one publishes in journals backed by established professional associations like TAPPI, your credibility as an author will also climb.

TAPPI Journal is a go-to place for scientific literature in the field of pulp, paper, tissue and advanced textiles. *TAPPI Journal* welcomes critical review papers on cutting-edge topics, such as the 2022 co-winner of the *TAPPI Journal* Best Research Paper Award and Honghi Tran Prize [3], for consideration. **TJ**

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