



Insights chemical Review Articles: A Short Overview

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Abstract: A review article is basically provided itself as a literature review relied on formerly published research on a context. This critical assessment can be compiled by anyone and consists of a subjective opinion of a research. The regular format of a systematic review on a title involves steps of introduction, methods, results, and discussion regarding with a research article. The narrative or traditional literature reviews, scoping reviews, systematic quantitative literature reviews, Cochrane reviews, Campbell collaboration etc. all condense and critique a literature body about the research topic. Excepting the education system, experts mostly review the work of their peers for limpidity, novelty, and levy to the discipline of study. The main ideas of the review article are stated to identify the most important details that support the creativity of one's. A review article is desired to provide a summary or a synthesis of the output of selected research performances being published by other authors. The root purpose of a review article is to test the current state of the consequential publications on an invested topic. An article review ordering offers students or scholars to evaluate and analyze the findings of other experts in a particular field. However, the review articles teach about the authentic author working in a field in which the recent major advances and discoveries intend to find the significant gaps in the research. Additionally, the current debates readily determine the ideas of where research might go next. This paper concludes that more review articles will be needed to get knowledge in short time on a specific topic without having to read all the published works in the field.

Graphical Abstract:



Figure: A systematic guide to literature review development.

Introduction

A review article is an article that summarizes the present state of a specific research field. It measures and minimizes previously revealed studies, more than reporting new information or investigation. Review articles are occasionally also called survey articles, overview articles or, in news disclosing. Academic publications which specify in review articles are known as review journals. Above all, it is normal that a captious and, conjectural analysis of the literature earmarked the review field through abstract, arrangement, analysis and, assimilation in which a scientific theme be devoted to previously published discussions (Review article, *Wikipedia*).

The good quality review articles are now and then needed in the presence of the progressive number of research papers. A review article is desired to provide a summary or findings of chosen research achievement being published by other researchers. The principal purpose of a review article is to testify the current state of the topical publications on a given topic and to start a discussion about the research methodologies and the output related to the pointed topic (Bem, 1995). Therefore, a review article should possess a comprehensive list of regular references being thoroughly picked in the text. The figure of a review article may dictate the structure of a published paper because of the optional distinction of some root sections such as introduction, analytic model, materials and methods, results, or discussions (Robert *et al.*, 2018; Mahboob & Humphrey, 2008). Sometimes it is tough to classify a paper submission as a review article, a

regular paper, or just a comment after noticing the combined use of an expansive literature review, authentic research contributions, and specific comments regarding only a few cited papers. Then the authors may get review reports on case by case basis exposing a modification of the script (Tranfield *et al.*, 2003; Baumeister & Leary, 1997). Although there is no finite limitation concerning the review titles, it is superior that even little focused contributions are being described from a more general overview which would only prosperity the authors with an utmost increase of the number of citations delegating to their articles (Cooper, 1990).

Review articles can be randomly classified into two fundamental types, systematic and non-systematic ones. The systematic type prescribes an improved preparation and relies on a peculiar methodology being selected in advance, where selected root studies are being detached in connection to a long-standing problem announcement. The non-systematic type may involve a selection of a vast range of technical output related to a chosen topic which empowers the professional experiences and attention of the authors. The virtue of such papers relies on the competency and the authentic efforts of the authors to deliver a good review of the subject (Day & Gastel, 2006; Noguchi, 2006; Ridley, 2008). Despite the several levels of complexity of the technical points, the review articles are confined in including analytical and experimental compartments from cited papers. The volume of text should be well suited with the quantity of figures so that the addressed issues are definitely stated in a straight and efficient way. The true challenge here is in converting an accumulation of technical information into a compatible script which provides a substitute point of view on formerly unknown or not well suited relations among explicit studies (Alvesson & Sandberg, 2011; Bandara *et al.*, 2015). One should demand a proper balance between the ranges of differentiation and integration of several aspects of technical information as well as between the statistical exploration of experimental data and its theoretical illustration, etc. The review articles have to deliver forums for further disputations about the problem statements and not just shorten the landmarks of each cited paper but rather change the presented information into an inspirational topic for future studies (Eppler & Mengis, 2004).

Critical Reviews

The critical reviews putatively justify the strengths, weaknesses, and naked questions of a paper since studying its problem statement and scientific satisfaction. The critical reviews should entirely describe, then analyze and finally discuss the research output which would hopefully result in a critical assessment and a resultant formative interpretation of the chosen paper. The critical reviews must be emerged on confirmable scientific facts, arguments and reasoning but not on unresolved logic or personal interest. The technical negotiation should be presented with an attentive range of tolerance and understanding.

Surveys

The surveys are efficient and successful if they appeal a significant technological topic being at the focus of a wide part of the scientific society and the authors have in deepness understanding on the region of research as well as a complete access to all the topical materials to be cited. Surveys usually hold an immense literature review and a lot of technical trifles regarding different directions of the scientific investigation. A literature review may quote a glamor of journal papers, books, dissertations, conference proceedings, etc. However, such a literature review singly does not yield an entire survey which is basically quite a sophisticated manuscript.

Article Reviews

The article review is founded on the choice of a single dissertation on technology and its beautiful evaluation. The following initiative sequence can be utilized as a rule of press: read carefully the selected article, list the technical outreach of concern, prepare a manuscript version, takes advice with colleagues, exhibits at least one revision earlier to submission.

Historical Reviews

Manuscripts on the narrative of technology and processing management are also summoned for publication possessed that the historical details and their statement are original and not formerly published elsewhere.

Book Reviews

A book review may introduce one particular book or a class of books devoted to terminology. It is preferable to alleviate the analytical and graphical sequence and concentrate on the details about the valuable findings which can be found from the book chapters. In case of a dissertation monograph, where comparative chapters are scripted by different authors, collaborate on both the self-consistency and the overall writing mode.

Strategic Technical Reviews

As technology and management science match increasingly interrelated, the tactful reviews are having their specific function among the scholarly articles. Strategic technical reviews prove the long-term advances of regional, global, or corporate technological outreaches.

In the most ordinary cases, review papers are crucial assessment of material which has already been disclosed and possessed the quantitative effects evaluation. The authors tactically recognize and synthesize pertinent literature to measure a fixed research insight, exclusive domain, theoretical comprehension, or methodology and thereabout provide learners with the updated understanding of the research findings (Wade & Hulland, 2004). The

objective of the review papers can be changeable relying on their standard identity and research parameter. First of all, it is normal that the conformal ambiguities configure and determine the augmentation of research center (Vargas & Schafer, 2013). Also, the research profile renders a racially balanced, synthesized perspective of the recent center of knowledge. It can be very helpful for dictating the inconstancy in preparatory verdict and significant elucidation (e.g., moderators, intercessors, operations, approaches). Furthermore, it picks up the up-to-date methodological statement and unique perception with theoretical frameworks to harmonize and enlarge the previous research. However, the full complement of a published work prescribes the research appreciation, existing bindings, and future research conception (Article Review, 2017). Not only a review paper can design all of satisfaction but also its catalogue remarks the principal benefaction. Basically, a review paper tends to acquire three types of key kinetics for providing an adequate subscription. At first, the research state becomes to be congruent for a review paper. For example: a substantial literature of past research presents to make the assimilation and synthesis profitable especially if present research releases the theoretical incompleteness in its impact. Secondly, the review paper should be well suited with a suitable literature accumulation and analysis recipe, substantial wideness and volume of literature, and a fascinating writing mode. Thirdly, the paper must consider suitable new insights depending on its stepwise discussion of various studies (Writing Academic Reviews, 2010). The systematic review papers illustrate its inevitable comprehension through the little by little findings, harmonizing evidence, drawing a reaction stem with meta-analyses. Afterward, an acceptable review paper delivers a solid manifesto for future research planning in the dissertation areas. As a consequence of proper findings in research paper, an investigator can get a good review paper to learn about and mark up key insights to new areas (Wolfswinkel *et al.*, 2011). Another, the domain expansion is one of the key kinetics of a review paper that often gets looked over outside the nucleus area being reviewed. Nowadays, it is becoming more significant with the broadening depth of marketing (e.g., finance, strategic management, applied psychology, sociology, econometric modeling) and the developing locomotion in the advancement of marketing science (big data, social media, digital marketing). Overall both the meta-analyses and systematic review papers intend to assist the interested motion and accelerate the academics track of special research findings (Turner *et al.*, 2008; Okoli, 2015; Helmericks *et al.*, 1991).

A review article is a tactful supervision of writing that idolizes the several objectives with great importance. The summary of a research article justifies both the strengths and weaknesses topic points in the review article. The justification is readily used to develop the article as connected to the focus surface about the topic. Besides, there exist various requirements used to enlarge the basic contents in review article. In accordance with this consequence, the research literature compared the introducing corner for upcoming research evaluation. Because of the comparison between the critical

reading strategies and academic writing skills, a review article is to become more convenient for people in research working areas. Thereby, the recent major advances and discoveries find a significant gap of a topic in the research. Most importantly, the current debates of research are competitive to imagine the new ideas of where research might go next.

Conclusion: A review article is a secondary source that is illustrated about other articles, and does not narrate authentic research of its own. A review empowers to shorten the main points of the article as well as one's opinions with its accuracy, clarity, and significance. It exposes the relevant comments on implications for future research or discussion in the field. The interpretation of a systematic context unites all of review approaches by combining qualitative with quantitative research outcomes. A good review makes a bid with previous ideas and contributes to understanding of certain areas, ideas, and topics. Finally, the conformation of a review curtails the 'state-of-the-literature' for developing the advanced ways and ideas of thinking. Moreover, if published in a good peer-reviewed journal, review articles often have a high impact and receive a lot of citations. We hope that our article can serve as an inspiration for authors as they work on designing and writing scientific reviews.

References:

Alvesson, M., & Sandberg, J. (2011). Generating Research Questions Through Problematization. *Academy of Management Review*, 36, 247-271.

Article Review (2017). The University of Sydney.

Bandara, W., Furtmueller, E., Gorbacheva, E., Miskon, S., & Beekhuyzen, J. (2015). Achieving Rigor in Literature Reviews: Insights from Qualitative Data Analysis and Tool-Support. *Communications of the Association for Information Systems*, 37.

Baumeister, R.E., & Leary, M.R. (1997). Writing narrative literature reviews. *Review of General Psychology*, 1, 311-320.

Bem, D.J. (1995). Writing a review article. *Psychological Bulletin*, 118, 172-177.

Cooper, H. (1990). Meta-analysis and the integrative research review. *Research methods in personality and social psychology*, 142-163.

Day, R. & Gastel B. (2006). How to write and publish a scientific paper. Sixth edition, Greenwood Press, Westport.

Eppler, M. J., & Mengis, J. "The Concept of Information Overload: A Review of Literature from Organization Science, Accounting, Marketing, MIS, and Related Disciplines." *The Information Society*, 2004, 20, 325-344, DOI: 10.1080/01972240490507974.

Helmericks, S.G., Nelsen, R.L., & Unnithan, N.P. (1991). The researcher, the topic, and the literature: A procedure for systematizing literature searches. *The Journal of Applied Behavioral Science*, 27, 285-294.

Mahboob, A. & Humphrey, S. (2008). How to Write an Article Review. University of Sydney: Unpublished resource material developed for the SLATE Project.

Noguchi, J. (2006). The science review article- An opportune genre in the construction of science. *Linguistic Insights Volume 17*, Peter Lang, Bern.

Okoli C. (2015). A Guide to Conducting a Standalone Systematic Literature Review. *Communications of the Association for Information Systems*, 37, 879-910.

Review article. *Wikipedia*.

Ridley, D. (2008). *The literature review- a step by step guide for students*. Sage Publications, London.

Robert W.P., Mark B.H., & John H. (2018). Review articles: purpose, process, and structure." *J. of the Acad. Mark. Sci.*, 46, 1-5.

Tranfield, D., Denyer D., & P. Smart (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14, 207-22.

Writing Academic Reviews (2010). Ontario: The Trent University Academic Skills Centre.

Turner, M., Kitchenham, B., Budgen, D., & Brereton, O.P. (2008). Lessons learnt undertaking a large-scale systematic literature review. *Proceedings of EASE*, 8.

Vargas, N., & Schafer, M.H. (2013). Diversity in action: Interpersonal networks and the distribution of advice. *Social Science Research*, 42(1), 46-58.

Wade, M., & Hulland, J. (2004). The resource-based view and information systems research: Review, extension, and suggestions for future research. *MIS quarterly*, 107-142.

Wolfswinkel, J.F., Furtmueller, E., & Wilderom, C.P.M. (2011). Using grounded theory as a method for rigorously reviewing literature. *European Journal of Information Systems*.

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