

A framework for strict structured literature reviews within management research and management education: establishing a model for evidence-based management and increased scholarly interaction

Abstract

Over the last decade, the systematic literature review has extended to management research and management education. The purpose of this paper is to present an alternative method named Strict Structured Literature Review (SSLR), to provide a robust selection of articles for starting a longitudinal study or as a fast reliable and transparent method reviewing literature for shorter work under a time-limit, for example research projects or educational assignments. A properly executed Strict Structured Literature Review will lead to the desirable outcome of connecting researchers, or students, with practitioners and create conditions for evidence-based management based on already existing research results. Using a Strict Structured Literature Review would create a publishing strategy where research funders return on investments (ROI) can be met through increased implementation of earlier research results in organizational decision making as well as extended scholarly communication. This is completely in line with the movement towards open science. At the same time, the method for Strict Structured Literature Review fosters a development within management education towards evidence-based management and scholarly interaction.

Keywords: literature reviews, management research, management education, scholarly communication, scholarly cooperation, evidence-based management, knowledge management, university-industry collaboration, open science, systematic literature review, decision making

Background

The author has come to realize, due to 25 years of working experience at a higher education institution, that the use of systematic literature reviews within management research has gained in interest and use among scholars. As an example, within supply chain management there is a development towards a new paradigm exploring the use of systematic literature reviews in developing their own theory base (Durach, Kembro & Weiland, 2017). Besides, also doctoral students use the systematic review process for mapping theoretical aspects of their subject as well as more summary reviews, overviews, done among master students and even undergraduate students. Scholars do it as a part of their scholarly communication and doctoral students as a part of their dissertation. Master students, on the other hand, receive assignments challenging them to reflect an understanding of a specific topic through conducting a literature review. The finalized master thesis can contribute to scientific and professional knowledge by being stored in an institutional digital repository and made available through open access (Schopf J., Vanacker, S., Kergosien E & Jacquemin B, 2018). This may not be an easy task to accomplish without training, experience and knowledge about bibliographic search techniques and how to retrieve relevant information (Goodman, Gary & Wood, 2014).

Furthermore, the author also performed an exploration of the topic, using scholarly articles suggesting how to conduct a systematic literature review. Five problems, which have not been previously discussed, on how to conduct a systematic literature review were identified:

1. The absence of a method for more strict and reliable review of literature.
2. A foundation for longitudinal review studies to make comparisons over time to identify trends or developments within a research area is not present.
3. The systematic literature review has been something mostly developed and used by researchers demonstrating their analyses to other management researchers. Today, society and stakeholders put an emphasis on getting return on investments for money spent on research by implementing earlier research results in practice.
4. The possibility to use a faster and more robust method for reviewing earlier research results as a part of management education to promote evidence-based management education and research.
5. The development towards open science urge for a movement from scholarly communication towards scholarly interaction which requires a much faster publication process and open access to publications.

Undertaking a review of the literature for best evidence is a key research objective, both for academics as well as practitioners (Tranfield, Denyer & Smart, 2003). A problem today is that few practitioners have access to the most relevant databases and therefore, not able to conduct their own literature review as a foundation for evidence-based management. Another issue is that they rarely have the time, or knowledge, to conduct a well-organized systematic literature review (Arksey & O'Malley, 2005). The systematic literature review method can also be complicated and hard to follow even among researchers themselves and there is even misuse of the method due to the variety of review types available and lack of consensus (Grant & Booth, 2009). Also, because of different considerations on inclusion and exclusion or contradictions in the research synthesis, due to practical and philosophical problems especially for qualitative studies, which is often the case in management research, there is an obvious risk for bias (Durach et al., 2017; Tranfield et al., 2003).

In the following, thoughts on developing a more robust, transparent and basic method, for scholars within management science on how to conduct a literature review that could be a solution to the five identified problems and of interest for practitioners in their decision making, will be discussed. This method, strict structured literature review, will also be relevant for more limited literature-based projects, such as undergraduate or master assignments (Armitage & Keeble-Allen, 2008).

Rationale for a strict structured literature review

Already in 1993, Robert J. Samuelson wrote a debate article, *The death of management*, in *Newsweek*. The problem of general management education and management practice not leading to the development of rational and effective decisions was presented. Instead, executives were relying on internal reviews, data and presentation skills. This moved managers away from comprehending their organizations and the market. In turn, that led to a loss of market knowledge, a failure to adapt quickly to new technologies, lagging product development and insufficient customer intelligence (Samuelson, 1993). Consequently, competitive advantage was lost.

In reply, the former President of Academy of Management, Donald C. Hambrick (1994), wrote the 1993 Presidential address, What if the academy actually mattered, discussing how scholars for the future would regain importance and start to matter. Hambrick stated:

Colleagues, if we believe highly in what we do, if we believe in the significance of advanced thinking and research on management, then it is time we showed it. We must recognize that our responsibility is not to ourselves, but rather to the institutions around the world that are in dire need of improved management, as well as to those individuals who seek to be the most effective managers they possibly can be. It is time for us to break out of our closed loop. It is time for us to matter. (p. 13)

One of his suggestions was to honor those who have contributed the most to managerial practice among scholars through an award. In the process, work published over a longer period of time would come into consideration to ensure that the impact was genuine and sustained. This would indicate that scholars were ready to help practitioners differentiate and identify fundamental advances and insights. In this situation, which is still valid, the strict structured literature review, can be used as a tool to help practitioners broaden their horizons and deepen their knowledge with support from scholars and advanced students to accomplish that goal.

A counterpoint to this could be that we, today, have open access (OA) and Internet infrastructure with access to information for decision-making. The amount of information has increased enormously, and the production of research has also increased (Bornmann & Mutz, 2015). This may, however, present a problem. Practitioners are under pressure and time is not an infinite resource. The knowledge on how to retrieve, evaluate and condense sources is also limited among practitioners. Unfortunately, this often has as a consequence that decisions are based on preference for colloquial knowledge based on individual experiences to avoid these barriers. These problems and barriers have also been identified within healthcare organizations by Rundall et al. (2007) suggesting the informed decision toolbox as a pathway for evidence in decision making to improve organizational performance.

Therefore, organized and stringent strict structured literature reviews within management research can be very helpful and informative for practitioners in their decision making by giving them an evaluated, annotated, review of research results published in scholarly journals that is, often not accessible for decision-makers outside the research society. A few organizations or corporations have their own libraries and librarians and/or access to relevant databases, but for most SMEs, that is not an option.

The need for reviewed information for decision making remains relevant today. It could be argued that it is even more important in a time of rapid environmental change, when accurate and fast organizational decision making are necessary. At that time, the use of tools such as big data, social media and digital platforms are recommended rather than scholars and previous research (Gordon et al., 2016).

Method for conducting a strict structured literature review

The method for conducting a strict structured literature review is very important. One of the desired results is to retrieve a search result that is highly transparent and reliable. The strict structured literature review will be easy to duplicate while receiving the exact same sample that only consist of peer-reviewed scholarly articles. An advantage with this method will be the possibility of reusing the search for longitudinal studies. Additionally, the process will be

easy to replicate by a teacher or supervisor to evaluate their student's work for feedback, guidance and evaluation. The process will save time since the time-consuming inclusion/exclusion phase as well as the synthesizing of literature can be skipped, which is necessary for a systematic review. The review will be based only on that fixed sample retrieved. Improved interfaces and functionality together with an enormous supplementation of research articles in modern bibliographic databases offers that opportunity.

Step 1: In regards of which search tool to use the author recommends Scopus™. Today, many universities have access to Scopus™, a bibliographic database for scholarly journals (almost 22 000 peer-reviewed journals included). Scopus™ is the largest commercial database of peer-reviewed literature with the possibility to limit searches to only include articles published in scholarly journals, which is considered the most important research document. Tranfield et al. (2003) identifies this:

However, management researchers usually rely on the implicit quality rating of a particular journal, rather than formally applying any quality assessment criteria to the articles they include in their reviews (i.e. refereed journals are 'better' than practitioner journals). (p. 216)

Also, in comparison with Web of Science™ (which is based on The Science Citation Index constructed in a predigital era), Scopus™ was built in the digital era and has not only improved the weaknesses of Web of Science™ but also adopted to innovative technology (Sugimoto & Lariviere, 2018)

Using only one database and retrieving a single document type could be regarded as a deficiency, but most secondary sources such as books, trade publications and magazines present the primary source of knowledge that has already appeared in scholarly journals. Rowley and Slack (2004) suggest that articles from scholarly or research journals should form the core of the literature review, since they are written by researchers and have been peer refereed before publication. This method is not applicable if you conduct a systematic literature review which demands the usage of multiple databases and several document types.

Step 2: Perform the search. As a part of the process, a recommendation will be to start the search by creating a mind map on a *tabula rasa* for the search (increased transparency). The outcome will be that the knowledge on the right vocabulary is deepened. The process will create a thesaurus, hierarchical structure, for the information retrieval. When applicable, it is during this process involving practitioners and adopt their perceived real-life situations is recommended. Thereafter, a pilot search can be done with the purpose to evaluate the result list. How many hits are received? Is familiar research recognized? Thereafter, the retrieved titles, abstracts and keywords will be read to evaluate vocabulary and eventually refine the search string further. This is an iterative process to clearly define the topic and avoid false focus (Kennedy et al., 1999).

After the information retrieval, decide on which limitations that will be added to the search. The Scopus™ interface allows, if necessary, the researcher or student to easily narrow down the result list using different filters. However, everything selected will affect the final sample. Therefore, it is extremely important to explain the process in the documentation and be aware of what is done and why it is done. If there are problems during this phase, contacting a librarian for support is advisable.

If the search is well documented, it is possible to replicate, and the exact same articles will be retrieved. That makes the strict structured literature review very robust, transparent and extremely fast to execute. If another scholar wants to do a review, the foundation for the

analysis is the same. After 5 years, if a researcher wants to carry through the same review but extended over 10 years, just edit date range. The original articles will still appear, plus those which have been added afterwards. A search method suitable for a longitudinal study is developed. The ability to identify trends and developments within the research area is created.

In regard to using citation data as a filter, a new function recently added to the most modern databases, that provides a possibility to sort the result list after how many times an individual article has been used in other scientific publications. This is a unique option to let the scholar review articles that have had a demonstrated impact on the research area, but only for scholarly articles published within peer-reviewed journals. This may become an important part of the literature reviews of the future due to the increase in research output, a doubling within every nine years (Bornmann & Mutz, 2015). Another initiative to confront this growth is a new model for computational literature reviews (CLR) that has been presented by M. J. Mortenson & R. Vidgen (2016). Using citation data also brings forth an option to more precisely evaluate individual articles or researchers in the review process instead of complete journals assessed through impact factor which is a vaguer and criticized method. An example of this criticism has been put forward in the conclusions of J. K. Vanclay (2012) article, Impact factor: outdated artefact or stepping-stone to journal certification.

Step 3: Scrutinize the result list, as with an ordinary literature reviews, to prepare a report suitable for practitioners to use in their process of making informed decisions to implement an evidence-base practice (Nutley & Davies, 2000). The report will help organizations move into the double-loop of learning (Argyris & Schön, 1978).

To summarize, there is a need for robust strategies supporting practice with implementation of the best evidence condensed from earlier research findings. That has already been discussed in a series of articles within healthcare (Bero et al., 1998; Boaz et al., 2011). This should be equally important within management science, utilizing new advanced search tools to make practical use of the existing research efforts already available. Besides, fast diffusion of reliable research results is needed in the new era of rapid changes and disruptive technologies. The strict structured literature review has the characteristics to be a way forward meeting that requirement.

Strict structured literature review versus systematic literature review

The strict structured literature review is by no means a suggestion to replace the systematic literature review which will still be an important method for more comprehensive literature reviews by scholars as part of the scientific process. The structured method approaches other needs and conditions which are described above.

To embed the method, an argumentation evaluating the differences and illuminate the impact using strict structured literature review in comparison with the systematic literature review will be presented.

In a strict structured literature review the search process is more focused on analyzing and improving the result list, in cooperation with practitioners/customers, than trying to formulate the perfect search string. Today, modern databases have evolved, and the search interface gives much more options than before. The easy access to different filters and facets can easily influence and improve the Boolean search technique. That allows the researcher or student to narrow down and refine their search results to adopt to the postulated demands received from the client. New options such as searching for citation data identifies research results with confirmed impact. This can be done in seconds. Therefore, trial and error searches can easily

be done to ensure receiving the right sample of retrieved documents. Instead, available time can be utilized for analyzing the results more closely and adopt established theories to practical issues. In comparison to the systematic literature review, doing a strict structured literature review will be fully transparent, possible to monitor and directly applicable. The search can be recapitulated with high reliability. Tranfield et al. (2003) emphasize the importance of reducing human errors and biases in systematic reviews. This method effectively eliminates this issue by excluding the data-extraction process necessary for a systematic literature review.

For a systematic literature review, time is invested in including and excluding articles. The systematic literature review demands the researcher select, by their own opinion, important material not retrieved through the search. The sample can also be expanded using other search tools or looking for other document types or grey literature on the web. This process is not transparent and sometimes, fairly often, not precisely accounted for in the review. Also, the process forces at least one colleague to observe what has been done to eliminate biases. Although, a systematic literature review is still not a secure method since there is no feasibility to be sure on finding everything of importance, it is simply impossible to retrieve all information available regardless of resources used. There will be an unavoidable deficiency. Another source of error with the systematic literature review is the use of the same search string in different databases. The search logic works differently in the various databases, or search engines, and will not execute the search exactly the same. Therefore, the sample is hard to compare accurately. This meticulous process conducting a systematic literature review often ends with a very small number of in-depth reviews which jeopardize the whole process and minimize transparency, as discussed in MacLure (2005) critical article, "Clarity bordering on stupidity": where's the quality in systematic review?

Another consideration, there is not enough time for the time-consuming process that follows with a systematic literature review if a researcher wants to influence practitioner's decision making, since the cycles for policies and decisions revolves at a faster speed than the research cycle (Pawson, 2002). That is not likely to change in the future, rather the opposite. Grant & Both (2009) explain this:

Recent years have seen recognition that the typical timescale commanded by the rigour of the systematic review process may be unsuited to the decision-making windows available to most policymakers. (p. 92)

With strict structured literature review, there is a recommendation to invite practitioners in the process. Due to the simple and transparent retrieval process, practitioners can apply real-life problems already in the search string. The dissemination should be easier for them to understand and follow when using this robust method. In the documentation the complete sample is present and the analyze that scholars or students would bring forth identifies trends or practices from earlier research directly applicable in the decision making of the organization. Nutley and Davies (2000) raise the problem that much research has little or no impact on practice. There is a need for a more evidence-based practice, not a simple dissemination of research findings, aiming for a more context sensitive science. The strict structured literature review could be a strategy to implement evidence-based practice in cooperation directly with the practitioner, who is best suited to evaluate and implement the findings in practice. Therefore, the report needs to be highly customized and not primarily aimed at publishing in scholarly journals. Mode-2 science will meet Mode-2 society and an *agora* will be accomplished to test and contextualized robust knowledge. The boundaries between practice and science within management research will dissolve (Nowotny, Scott &

Gibbons, 2001). In the contemporary debate on open science and open access this can be a useful contribution.

Discussion

Carol H. Weiss' article, Have we learned anything new about the use of evaluation, on the possibilities to transfer new findings into other similar contexts is still valid (Weiss, 1998). Her argumentation gives:

We can not transfer (and use) evaluation findings mechanically from one place to another. But certainly we can gain important information about what happens in the sites studied, and we can use that information as illustration and metaphor of what can happen under similar conditions elsewhere. (p. 29)

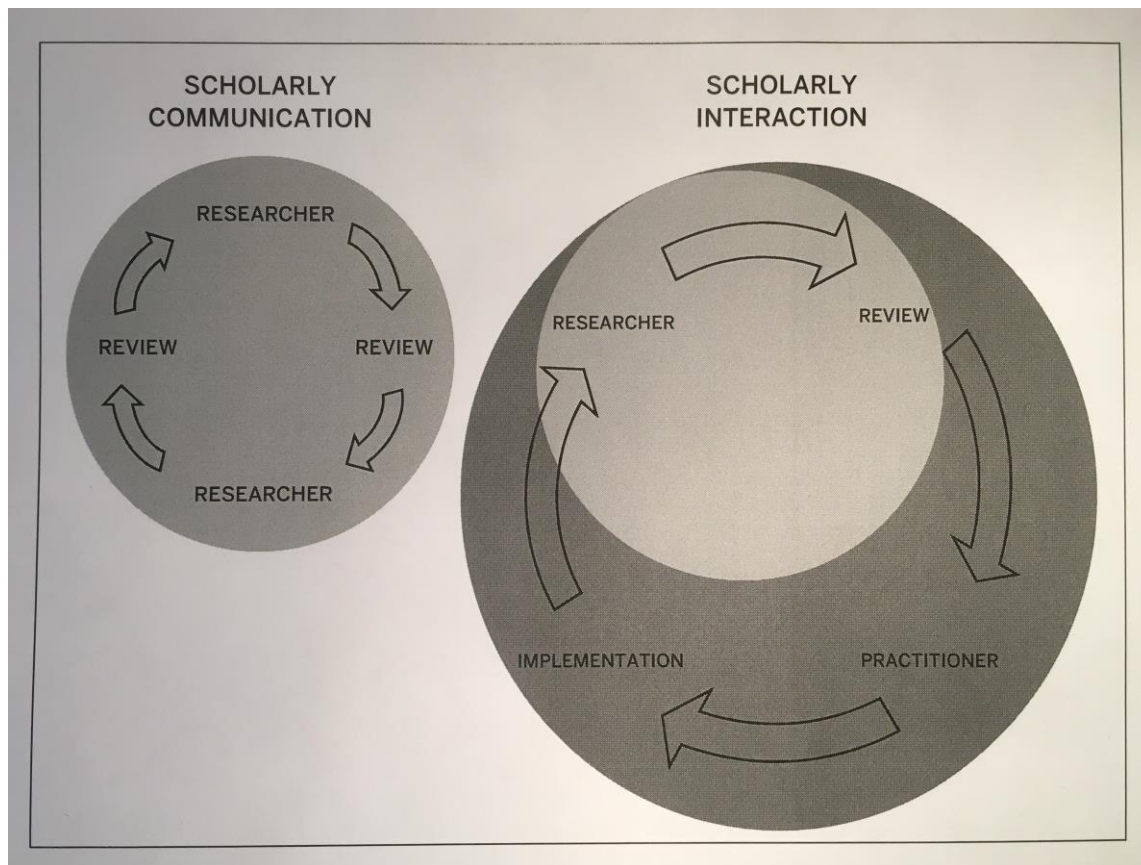
Today the impact of academic publishing relies on counting publications and citations. A system where scholars publish their research in scholarly journals aimed for other scholars has evolved. If the research society wants to be of importance for practitioners, this is not an optimal solution. As Tranfield et al. (2003) state:

Reviews of the available evidence in management to assimilate 'best evidence' to provide insights and guidance for intervention into the operational needs of practitioners and policymakers have largely become a secondary consideration. (p. 208)

R. B. Briner et al. (2009) have noticed that it is difficult to practice evidence-based management (EBMgt) without the use of accessible systematic reviews as evidence. To be able to utilize the evidence from scholarly reviews there is a need to adopt to the local context, identify the problem from practitioner's view, not as a research problem, and to make the review more fit-for-purpose. This research-practice gap, and need for more tailor-made solutions, has been reported from many different disciplines and identified by Trinder and Reynolds (2000).

The strict structured literature review invites the practitioners already from start letting them define the problem from their own experiences and context, then the scholars perform the structured review to bring forth the foundation of evidence from earlier research. A positive side effect is the insight on real-life problems scholars and students receives, which can be developed into future research questions. Another advantage is the shift of learning for students (and scholars) moving the cognitive dimension further in regards of Bloom's taxonomy from evaluate to create in accordance to the revision of Bloom's taxonomy of educational objectives by Anderson et al. (2001). Since the strict structured literature review offers options for suggesting innovative solutions for identified problems this objective can be obtained. Finally, the responsibility for decision making and implementation, will always lie on the practitioners themselves and is not subject to the researcher. The scholar on the other hand is recommended to evaluate the implementation to identify opportunities for further and in-depth research to close the gap between research and practice as suggested by M. J. Leach (2006).

Figure 1. Towards scholarly interaction



With support of the Internet infrastructure and the use of new tools for sharing research results, according to a study by J. C. Besley (2015), as many as 87% of the researchers are willing to engage online and communicate science with adult members of the public, it's time to seize the opportunity. Using open access and the strict structured literature review method, there is a foundation for a new form of publishing. This will be aimed towards practitioners and based on already published and evaluated research. This publishing strategy should focus on using earlier research results adjusted to be more easily communicated and implemented in real life situations to merge the two arenas as a part of the development towards open science. To make this happen there is also a need to change the incentives for academic publishing to appraise this form of scholarly publishing aiming directly towards practitioners. A shift from scholarly communication towards scholarly interaction will be attained (Figure 1).

Conclusion

If the funding of research will continue to have an urge for return on investments fulfilled through implementing research results in practitioner's organizational decision making as a part of the movement towards open science the strict structured literature review method can be one of the solutions that contributes to this development. The use of the strict structured literature review and a change in publishing strategy, would then be desirable and a goal for management research and education as an opportunity for evidence-based management, informed decision making and increased scholarly interaction.

References:

- Anderson, L. W. et al. (Eds.). (2001). *A taxonomy for learning, teaching and assessing: A revision of Bloom's taxonomy of educational objectives*. New York: Addison Wesley Longman, Inc.
- Argyris, C. & Schön, D. A. (1978). *Organizational learning: A theory of action perspective*. Reading, Massachusetts: Addison-Wesley Publishing Company.
- Arksey, H. & O'Malley, L (2005). Scoping studies: towards a methodological framework. *International Journal of Social Research Methodology*, 8(1), 19-32.
- Armitage, A. & Keeble-Allen, D. (2008). Undertaking a structured literature review or structuring a literature review: Tales from the field. *The Electronic Journal of Business Research Methods*, 6(2), 103-114.
- Bero, L., Grilli R., Grimshaw, J. M., Harvey, E., Oxman, A. D. & Thomson, M. A. (1998). Closing the gap between research and practice: An overview of systematic reviews of interventions to promote the implementation of research findings. *British Medical Journal*, 317, 465-468.
- Besley, J.C. (2015). What do scientist think about the public and does it matter to their online engagement? *Science and Public Policy*, 42, 201-214.
- Boaz, A., Baeza, J., Fraser, A., & The European Implementation Score Collaborative Group (EIS) (2011). Effective implementation of research into practice: An overview of systematic reviews of the health literature. *BMC Research Notes*, 4, 212.
- Bornmann, L. & Mutz, R. (2015). Growth rates of modern science: A bibliometric analysis based on the number of publications and cited references. *Journal of the Association for Information Science and Technology*, 66(11), 2215-2222.
- Briner, R. B., Denyer D. & Rousseau, D. M. (2009). Evidence-based management: Concept cleanup time? *Academy of Management Perspectives*, 23(4), 19-32.
- Durach, C. F., Kembro, J. & Weiland, A (2017). A new paradigm for systematic literature reviews in supply chain management. *Journal of Supply Chain Management* 53(4), 67-85.
- Goodman, J. S., Gary M. S. & Wood, R. E. (2014). Bibliographic search training for evidence-based management education: A review of relevant literatures. *Academy of Management Learning and Education*, 13(3), 322-353.
- Grant, J. & Booth, A. (2009). A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal*, 26, 91-108.
- Hambrick, D. C. (1994). 1993 Presidential address: What if the academy actually mattered? *Academy of Management Review*, 19(1), 11-16.
- Kennedy, L., Cole, C. & Carter, S. (1999). The false focus in online searching. *Reference & User Services Quarterly*, 38(3), 267-273.
- Leach, M. J. (2006). Evidence-based practice: a framework for clinical practice and research design. *International Journal of Nursing Practice*, 12, 248-251.
- MacLure, M. (2005). "Clarity bordering on stupidity": where's the quality in systematic review? *Journal of Education Policy*, 20(4), 393-416.

McKinsey & Company. New insights for new growth: What it takes to understand your customers today. (2016). Retrieved from <http://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/new-insights-for-new-growth-what-it-takes-to-understand-your-customers-today>. (Archived by WebCite® at <http://www.webcitation.org/70L3fQyYb>)

Mortensen, M. J., & Vidgen, R. (2016). A computational literature review of the technology acceptance model. *International Journal of Information Management*, 36(6), 1248-1259.

Nowotny, H., Scott, P. & Gibbons, M. (2001). *Re-thinking science: knowledge and the public in an age of uncertainty*. Malden: Blackwell Publishers Inc.

Nutley, S. & Davies, H. T. O. (2000). Getting research into practice: Making a reality of evidence-based practice: Some lessons from the diffusion of innovations. *Public Money & Management*, 20(4), 35-42.

Pawson, R. (2002). Evidence-based policy: The promise of realist synthesis. *Evaluation*, 8(3), 340-358.

Rowley, J. & Slack, F. (2004). Conducting a literature review. *Management Research News* 27(6), 31-39.

Rundall, T. G., Martelli, P. F., Arroyo, L., McCurdy, R., Graetz, I., Neuwirth E.B., ... Hsu, J. (2007). The informed decision toolbox: Tools for knowledge transfer and performance improvement. *Journal of Healthcare Management*, 52(5), 325-341.

Samuelson, R. J. (1993). The death of management. *Newsweek May 10*, 55.

Schopf, J., Vanacker, S., Kergosien E. & Jacquemin, B. (2018). Master's theses and open scholarship: a case study. *Digital Library Perspectives*, 34(4), 276-287.

Sugimoto, C. R. & Lariviere, V. (2018). *Measuring research: what everyone needs to know*. New York: Oxford University Press.

Tranfield, D., Denyer, D. & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14, 207-222.

Trinder, L. & Reynolds, S. (2000). *Evidence-based practice: A critical appraisal*. Malden: Blackwell Science Inc.

Vanclay, J. K. (2012). Impact factor: outdated artefact or stepping-stone to journal certification? *Scientometrics*, 92, 211-238.

Weiss, C. H. (1998). Have we learned anything new about the use of evaluation? *American Journal of Evaluation*, 19(1), 21-33.