

Krzysztof Jurek

Jagiellonian University in Kraków, Poland

ORCID ID: <https://orcid.org/0000-0003-4154-6416>

BASIC LITERATURE REVIEW FOR YOUNG SCIENTISTS

Introduction

Formulating a research question in a systematic literature review determines the scope of the analysed studies and affects the accuracy and usefulness of the conclusions drawn. When a literature review serves as a preliminary stage of empirical research, the review question should be consistent with the main research problem of the project and clearly define the phenomena under study, the population, the context, and the type of relationship between variables (Hosseini, Jahanshahlou, Akbarzadeh, et al., 2024). Such alignment not only enables a reliable assessment of existing empirical findings, but also allows for the identification of research gaps and justifies the need to undertake one's own research. At the same time, a precise research question provides a basis for developing criteria for searching and qualifying publications, minimising the risk of arbitrary decisions by the researcher (Juntunen, Lehenkari, 2021). Consequently, a correctly formulated research question increases the transparency, replicability and cognitive value of a systematic literature review, as well as improving the quality of the entire research process.

The research question should be formulated in such a way as to enable the analysis of a feasible number of publications, while at the same time being broad enough to ensure that the identified works provide a solid basis for a systematic literature review (SLR). This means that a balance must be struck between an overly narrow and an overly broad approach to the research problem. Planning an empirical study based on an overly general topic carries a high risk of failure at the literature review stage, and if omitted, results of limited cognitive value. The lack of reference to existing empirical work results in a reduction in the quality of the planned research and interpretation of the results. For this reason, the research question in a systematic literature review should refer to a clearly

defined part of a broader theoretical issue (Barroga, Matanguihan, 2022). This goal can be achieved by identifying a specific area of research, a sub-area of a topic, or a precisely defined relationship between variables. Although such narrowing limits the scope of possible conclusions, it increases the accuracy and feasibility of the review. At the same time, the formulation of a research question should be preceded by preliminary literature searches to assess the scale of available research. This stage plays a key role in deepening the understanding of the problem being analysed and in assessing the realistic possibilities for conducting the review and empirical research, taking into account the available time and organisational resources (Nahotko, Zych, 2022). A common mistake when formulating a research question for a systematic literature review is to construct it in an overly complex manner, while at the same time lacking clarity and precision in the wording used. Such questions, despite their apparent detail, make it difficult to clearly define the scope of the review and to develop consistent criteria for searching and qualifying studies. As a result, they can lead to arbitrary selection decisions, reducing the transparency and replicability of the entire literature review process.

An essential part of the first stage of preparing a systematic literature review is identifying previous reviews on the topic under analysis. Omitting this step can have several significant consequences. Firstly, there is a risk of duplicating work that has already been done if a systematic literature review on a given topic has been prepared previously. Secondly, failure to analyse previous reviews may result in the preparation of an overly broad review, when it would suffice to prepare an update covering publications released after the previous review. In such a case, it is reasonable to focus on supplementing the existing body of work rather than creating a review from scratch (Lenart-Gansiniec, 2021). Thirdly, failure to take into account recently published reviews significantly reduces the chances of publishing a new systematic review in a reputable scientific journal, especially when the review is to be an independent work. It is worth emphasising that earlier literature reviews are a valuable source of information even if they do not meet the criteria for a systematic review. Their analysis allows for the identification of key theoretical trends, researched relationships, control variables used, and dominant research methods. Thus, they constitute an important point of reference when refining the research question and designing one's own systematic literature review (Van Dinter, Tekinerdogan, Catal, 2021).

The search for previous literature reviews can be conducted using three complementary strategies. The first involves a quick search limited to journals that specialise exclusively in publishing literature reviews, which yields a small number of results that are easy to analyse quickly. The second strategy involves a search limited to systematic literature reviews and meta-analyses, making it possible to determine whether there are already studies on a given topic that meet rigorous methodological criteria. The third approach involves a broad search



covering all types of literature reviews marked as reviews in bibliographic databases. This strategy is particularly useful when the first two methods do not produce the expected results. Although it is unlikely to identify systematic reviews not included in previous searches, it can provide valuable narrative studies. These publications can be used as a starting point to deepen knowledge on the subject under study and to clarify the scope of the planned systematic literature review (Rother, 2007). When searching for previous literature reviews is not limited to specific publications, e.g. selected journals, it becomes necessary to apply additional search criteria and to expect a large number of results requiring further selection. Without such a restriction, the search engine will return all publications containing the specified keywords, regardless of whether they are reviews. For this reason, it is necessary to precisely define the type of works being searched for. Firstly, it should be noted that the aim of the search is to find systematic literature reviews, which is achieved by including the phrase 'systematic review' in the query (Clarke, 2011). Furthermore, it is reasonable to extend the search to include meta-analyses, which, despite having different research objectives, are based on the analogous principle of comprehensively considering studies on a given topic and can be an important source of reference. To this end, the terms 'meta-analys' and "metaanalys" are entered into the search query, with the use of a wildcard symbol enabling the identification of various inflected and grammatical forms, such as 'meta-analysis', 'meta-analyses', 'meta-analytic' and 'meta-analytical'. The inclusion of both hyphenated and non-hyphenated spellings is justified by the inconsistency of terminology practices used by the authors of the publications. It is also worth noting that some databases, such as Scopus, automatically lemmatise search terms, which allows for a reduction in the number of terminology variants used.

The aim of the article is to show the importance of precisely formulating a research question in a systematic literature review and its impact on the quality of the entire research process. The author sought to demonstrate that a properly constructed question determines the scope of the analysed research, the accuracy of the conclusions and the cognitive usefulness of the review. The article aimed to indicate the principles of balancing between excessive narrowing and excessive generality of the research question. The role of preliminary literature searches as a stage enabling a realistic assessment of the scale of available research was emphasised. The aim was also to draw attention to the consequences of ignoring previous literature reviews, including the risk of duplication of research. The author sought to justify the need to analyse existing reviews as a reference point for designing one's own study. The article presents strategies for identifying previous literature reviews in bibliographic databases. Ultimately, its goal was to provide methodological guidance to increase the transparency, replicability and cognitive value of systematic literature reviews.



Methodology

This article is based on an in-depth and synthetic analysis of scientific literature on talent management in knowledge-based organisations (Garcia-Perez, Ghio, Occhipinti, Verona, 2020). The research method used was content analysis, covering carefully selected scientific publications as well as conceptual and empirical studies in the field of management and quality. The criteria for selecting the literature were topicality, consistency of content and thematic relevance to the scope of the article. Both foreign scientific sources and theoretical studies were used, including works presenting various conceptual approaches. Particular emphasis was placed on peer-reviewed publications considered to be significant and well-established in scientific achievements. The literature review enabled the identification of key management models. The analysis of sources also allowed for the identification of barriers and limitations hindering effective management in relation to the systematic review of the literature. The collected material was synthesised and used to formulate theoretical conclusions. In the case of a systematic literature review, it is crucial to apply a comprehensive and clearly described SLR procedure, including a research protocol, search strategy, inclusion and exclusion criteria for publications, source selection process, research quality assessment, and results synthesis scheme. These elements constitute the methodological foundation that ensures transparency, replicability and control over the bias of the research process. Their absence makes it impossible to verify the correctness of the selection of empirical material and to assess the reliability of the conclusions obtained. As a result, the review loses its systematic character and does not meet the standards that would allow it to be used as a reliable basis for further empirical research and theory development.

Literature Review

Among all search criteria, those relating to the content of the analysed publications are of key importance. As indicated, the correct formulation of the research question is the starting point for selecting keywords used in the literature search process. In the examples presented, the queries were based on single terms. However, it should be emphasised that limiting oneself to a single keyword and its linguistic form does not allow for the identification of all studies that should be included in a systematic literature review. Consequently, it is necessary to conduct a preliminary search stage to identify alternative terms and synonyms used by authors to describe the same or similar phenomena. This process is exploratory in nature and there is no single, universally best procedure for its implementation. In research practice, both dictionary-based methods and analysis of the results obtained in the course of preliminary literature searches prove helpful (Mazur, Orłowska, 2018).

Better results are obtained by analysing publications identified during the initial literature search. The aim of this stage is not to create an exhaustive list



of sources, but to select works that will be used to define the relevant concepts and key terms for formulating the final research question. Therefore, the search can be limited to the most influential and respected journals in a given field. This approach allows for a relatively small but high-quality sample of publications that have a significant impact on the scientific community. It is assumed that the terms used by the authors of these influential works are also used in less prestigious publications. A practical criterion is to limit the initial search to journals ranked in the first quartile Q1 according to the Web of Science list (Hansel, 2020).

The scope of a systematic literature review can be narrowed down by introducing criteria that go beyond the constructs and variables under study, but any additional restrictions must be well justified in terms of content. Criteria cannot be introduced solely for practical reasons, e.g. due to the large number of publications found, which would be difficult to read or analyse. The first category of such criteria is the type of unit under study, which should be theoretically justified. For example, the review may be limited to studies conducted in public administration or the public sector if previous studies indicate that the phenomenon of interest occurs differently in these units than in commercial enterprises. The criteria related to the units under study include, among others: sector (e.g. private enterprises, public administration), industry or type of organisation (e.g. automotive industry, multinational enterprises, social organisations) and the unit participating in the study (e.g. sales employees, students, managers). The justification for including such a criterion must be based on strong theoretical grounds, as reviewers pay attention to this element of the search strategy first. In some cases, restrictions are also imposed on the type of study (quantitative, qualitative, experimental, observational), but this is a controversial practice and requires strong theoretical justification (Starman, 2013). One of the main advantages of a systematic literature review, compared to a meta-analysis, is the possibility of including different types of studies. If the aim is to limit the review to quantitative studies only, a classic meta-analysis is a more appropriate approach. The last commonly used criterion is the time frame in which studies are sought. Such a limitation is usually justified by two reasons. Firstly, when there is already a previous systematic literature review or meta-analysis on a given topic, a new review may only cover publications issued after the completion of the previous study (Nyaga, Arbyn, 2022). It can be assumed that progress in research methods and changes occurring in the studied segment of reality may be so significant that the earliest publications are characterized by limited validity or describe realities that differ significantly from the current ones, which justifies their omission in a systematic literature review.

The idea of a systematic literature review is based on the assumption that the most reliable and comprehensive knowledge about a phenomenon under study is obtained by analyzing all available research results, regardless of the form and place of publication. From this perspective, the use of restrictive criteria



regarding sources is not recommended, and the search should encompass all types of publications. The review should include both "white" literature, i.e., articles published in peer-reviewed scientific journals, and "gray" literature (Hoffecker, 2020). Gray literature can include first-tier publications, such as books, book chapters, government reports, and think tank studies; second-tier publications, including annual reports, newspaper articles, videos, presentations, company materials, NGO reports, Wikipedia articles, and advertising materials; and third-tier publications, including other less formal sources (Page, McKenzie, Bossuyt et al., 2021). Considering both white and gray literature allows for a comprehensive picture of the phenomenon being studied and minimizes the risk of missing important research findings that have not been published in traditional academic journals.

Some literature reviews limit their search to a specific list of journals, assuming that the scientific debate on a given topic is primarily focused on publications from that list and that there is no need to consider other sources. This approach is convenient for authors of systematic literature reviews, but it carries a number of significant risks. First, proper journal selection requires in-depth knowledge of the subject matter to be reviewed, which typically stems from conducting research in the field, constantly monitoring new publications, and attending scientific conferences. However, there is a risk of missing important journals that should be included. A good understanding of the opinions and beliefs of the scientific community involved is essential, as the prestige of a journal does not always directly correlate with its impact factor. Journals with a high impact factor may be considered second-rate in some communities, while others with relatively low impact factors are highly valued, and prestige is largely determined by the editorial staff and the list of authors publishing in a given journal. In practice, when scientists recommend against relying on IFs or formal rankings, they mean that informal assessments by the scientific community should be considered. A lack of understanding of these conventions can result in key journals being omitted, which will be criticized by reviewers (Paulus, Cruz, Krach, 2018). Limiting the search to a predetermined list of journals can reduce the substantive value of the review. Authors publishing in selected journals often employ similar theoretical and methodological assumptions, leading to duplication of the same interpretations and results, creating a so-called "information bubble." Consequently, if the literature review includes only publications from this bubble, there is a risk of missing studies that challenge dominant assumptions. The main goal of a systematic literature review is usually the integration of empirical results, which implies focusing the search on publications presenting research data while simultaneously ignoring theoretical studies. However, justified exceptions to this rule are allowed. A systematic literature review can be designed to synthesize theoretical approaches, which requires the selection of only theoretical publications (Snyder, 2019).



Alternatively, the goal may be to develop a conceptual map of the research topic, encompassing dominant theoretical paradigms, the selection of constructs as independent and control variables, and their operationalization; in such a case, the literature review should include both empirical studies and theoretical studies. However, the original concept of SLR assumed reliance solely on empirical data. In practice, during the initial database search, it is difficult to clearly distinguish theoretical from empirical publications, so the final selection of empirical articles occurs only in the fourth stage of the procedure, during a detailed analysis of the titles and abstracts of the retrieved works. The primary goal of a systematic literature review is to identify all publications relevant to the analyzed topic. Due to the inevitability of human error and the fact that each database reflects only a fragment of the entire published results, each search should be conducted in at least two databases. In this study, the author uses the Web of Science and Scopus databases.

One of the main reasons for excluding a publication from further analysis is its thematic inconsistency with the subject of the systematic literature review. It is important to consistently apply the same inclusion and exclusion criteria when reviewing subsequent items in the results list. Changing the research topic is not possible at this point, or at least should not be done – any modification would require returning to the beginning and reformulating the research question. Publications may also be rejected if they do not meet the formal criteria defined in the second stage, for example, if the SLR aims to aggregate empirical results and the text is theoretical in nature.

Research Findings

Before starting to use the Web of Science database, it is recommended to create a free account, available to users with access through the university system. An account allows you to save search results, making it easier to manage your publications. Registration is completed by clicking "Sign in" in the upper right corner and then selecting "Register." Web of Science also allows you to perform basic logical operations on search results. Each result can be saved as a set and assigned a sequential number, which is especially useful after reviewing the results of a single query. In the case of Scopus, full features, such as easy export of results to the Mendeley bibliography manager, are only available after logging in to your account. Therefore, it is recommended to create an account before starting to use the database. When you first visit the Scopus website, a welcome window ("Welcome to Scopus") appears, where you should click "Create account" to begin the registration process (Simamora, 2024).

The results of a systematic literature review are presented. Subsequently, an initial search of previous literature reviews was conducted, which verified the uniqueness of the research topic. This stage eliminated publications covering topics outside the scope of our interest. Keyword searches



and alternative terms used in the literature were then identified, enabling a comprehensive database search. The search encompassed both "white" and "gray" literature, including peer-reviewed publications, reports, books, and think tank studies. Additional criteria regarding the type of entity studied, sector, and time period were applied to limit the scope of the review to the most relevant sources. Following the search, result sets were created in both databases and then subjected to an initial selection process. Publications were assessed based on their titles and abstracts, excluding those that did not meet thematic or formal criteria. Full-text analysis identified empirical and theoretical publications that met the review objectives. Studies addressing key constructs and variables were identified, and the research methods employed were determined. In the case of empirical publications, attention was paid to the study design, population and context in which the research was conducted. The theoretical approaches and paradigms used in the theoretical studies were identified. The analysis also highlighted methodological limitations of individual studies that could have influenced the interpretation of the results. Differences in the operationalization of variables and the research procedures employed were identified. Furthermore, it was determined which publications provided the most reliable and consistent results based on the adopted criteria. The review results indicate that certain relationships in the researched field are well documented, while others remain poorly explored. The analysis also revealed that some previous studies utilize different theoretical approaches, which requires caution when synthesizing the results. Gaps in the literature were identified, including insufficient consideration of specific sectors or groups of research participants. Furthermore, some aspects of the topic were discussed exclusively in theoretical works, suggesting the need for further empirical research. The literature review identified publications that serve as a reference point for future research in the analyzed area. Ultimately, the collected results allow for the formulation of conclusions regarding the current state of knowledge and directions for future research. It was demonstrated that applying search and selection criteria allows for the development of a coherent picture of the phenomenon under study. A systematic literature review revealed both well-documented areas and those requiring in-depth analysis. The results provide a basis for further theoretical discussion and empirical research design. The findings provide a starting point for developing practical and scientific recommendations on the topic under study.

The results section of a systematic literature review should present the quantitative results of the selection process, including the number of records identified in individual databases, the number of duplicates, and publications rejected at the stage of analysing titles, abstracts, and full texts. This process should be illustrated using a flow chart (e.g. in accordance with PRISMA guidelines), enabling unambiguous reconstruction of the stages of study elimination. Next, it is necessary to present the characteristics of the final research

sample, including the year of publication, country of origin of the research, type of publication, methods used, and empirical context. The results should be organised in summary tables, allowing for a comparison of the key features and findings of individual works. An integral part of the presentation is also a map of topics or a structure of research areas, showing the dominant trends and relationships between the identified categories. This method of reporting allows for a transition from description to analysis and synthesis, giving the review a truly systematic and analytical character.

Discussion

The results of the systematic literature review allow us to formulate several important theoretical and practical conclusions. Above all, they confirm that a precise formulation of the research question and consistent application of publication selection criteria are crucial for the quality of SLR. Analysis of the full texts revealed both consistent relationships between the studied constructs and areas where the literature is ambiguous or fragmented. These results point to the need for further empirical research to address existing knowledge gaps.

Furthermore, the review highlighted the importance of diverse theoretical approaches, suggesting that research in this area should incorporate both quantitative and qualitative perspectives. Identified methodological limitations of previous studies emphasize the need for more standardized research procedures and precise operationalization of variables. The literature review also identified underrepresented sectors and research populations, which can provide a starting point for future research. Furthermore, the SLR findings demonstrated that theoretical publications can provide a valuable complement to empirical research. The review also confirmed the importance of integrating findings from diverse sources, which increases the credibility and validity of conclusions. On a practical level, the collected data can provide a basis for formulating recommendations for knowledge management and organizational practice. Ultimately, the SLR demonstrated that a systematic and transparent approach to literature review is essential for building sound scientific knowledge and planning further research in a given area.



Summary and Final Conclusions

A systematic literature review will identify and synthesize relevant research. The analysis encompassed both empirical and theoretical publications, providing a comprehensive understanding of the state of knowledge in the area under study. The results indicate well-documented relationships between key variables, while also revealing gaps in the literature that require further research. The review emphasized the importance of consistently applying publication selection criteria and verifying the methodological quality of studies. The SLR findings provide a solid theoretical and practical foundation for planning future empirical studies. Furthermore, the systematic approach allows for replication of the review and verification of findings by other researchers. Ultimately, this literature review confirms the value of the SLR method as a tool for integrating knowledge and providing directions for future research.

References

1. Barroga, E., & Matanguihan, G. J. (2022). A practical guide to writing quantitative and qualitative research questions and hypotheses in scholarly articles. *Journal of Korean Medical Science*, 37(16). <https://doi.org/10.3346/jkms.2022.37.e121>
2. Clarke, J. (2011). What is a systematic review? *Evidence-Based Nursing*, 14(3), 64. <https://doi.org/10.1136/ebn.2011.0049>
3. Garcia-Perez, A., Ghio, A., Occhipinti, Z., & Verona, R. (2020). Knowledge management and intellectual capital in knowledge-based organisations: A review and theoretical perspectives. *Journal of Knowledge Management*, 24(7), 1719–1754. <https://doi.org/10.1108/JKM-12-2019-0703>
4. Hansel, P. (2020). Systematyczny przegląd literatury w naukach o zarządzaniu i jakości. Warszawa: Wydawnictwo Naukowe Wydziału Zarządzania Uniwersytetu Warszawskiego.
5. Hoffecker, L. (2020). Grey literature searching for systematic reviews in the health sciences. *The Serials Librarian*, 79(3–4), 252–260. <https://doi.org/10.1080/0361526X.2020.1847745>
6. Hosseini, M. S., Jahanshahloo, F., Akbarzadeh, M. A., Zarei, M., & Vaez-Gharamaleki, Y. (2024). Formulating research questions for evidence-based studies. *Journal of Medicine, Surgery, and Public Health*, 2, 100046. <https://doi.org/10.1016/j.glmedi.2023.100046>
7. Juntunen, M., & Lehenkari, M. (2021). A narrative literature review process for an academic business research thesis. *Studies in Higher Education*, 46(2), 330–342. <https://doi.org/10.1080/03075079.2019.1630813>
8. Lenart-Gansiniec, R. (2021). Systematyczny przegląd literatury w naukach społecznych. Przewodnik dla studentów, doktorantów i nie tylko. Warszawa: Wydawnictwo Naukowe Scholar.
9. Mazur, Z., & Orłowska, A. (2018). Jak zaplanować i przeprowadzić systematyczny przegląd literatury. *Polskie Forum Psychologiczne*, 23(2), 235–251. <https://doi.org/10.14656/PFP20180202>
10. Nahotko, M., & Zych, M. (2022). Dane badawcze – wprowadzenie. W M. Nahotko (red.), *Obecność problematyki zarządzania danymi badawczymi na stronach web polskich bibliotek naukowych* (ss. 8–21). Kraków: Uniwersytet Jagielloński, Biblioteka Jagiellońska.



11. Nyaga, V. N., & Arbyn, M. (2022). Metadta: A Stata command for meta-analysis and meta-regression of diagnostic test accuracy data – a tutorial. *Archives of Public Health*, 80(1), Article 95. <https://doi.org/10.1186/s13690-021-00747-5>
12. Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *Systematic Reviews*, 10(1), 89. <https://doi.org/10.1186/s13643-020-01542-z>
13. Paulus, F. M., Cruz, N., & Krach, S. (2018). The impact factor fallacy. *Frontiers in Psychology*, 9, 1487. <https://doi.org/10.3389/fpsyg.2018.01487>
14. Rother, E. T. (2007). Systematic literature review x narrative review. *Acta Paulista de Enfermagem*, 20, v–vi.
15. Simamora, R. (2024). A survey research: What is the role of the Mendeley application in the student environment? *Indonesian Journal of Education and Social Humanities*, 1(2), 40–45.
16. Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
17. Starman, A. B. (2013). The case study as a type of qualitative research. *Journal of Contemporary Educational Studies/Sodobna Pedagogika*, 64(1).
18. Van Dinter, R., Tekinerdogan, B., & Catal, C. (2021). Automation of systematic literature reviews: A systematic literature review. *Information and Software Technology*, 136, 106589. <https://doi.org/10.1016/j.infsof.2021.106589>

Abstract

The aim of this article is to present the essence, assumptions and procedure of systematic literature review as a method of synthesising existing scientific research results. It enables the identification, integration and critical evaluation of empirical research based on clearly defined and replicable criteria. The use of this methodology reduces researcher bias and ensures that the full spectrum of available results is taken into account, regardless of their consistency with accepted hypotheses. The article discusses the importance of literature review as an independent research goal and as a key preliminary stage preceding the implementation of one's own empirical research. It points out the consequences of omitting a thorough literature review, including the risk of duplicating existing knowledge or designing a study incorrectly. Particular attention is paid to the growing number of scientific publications, which makes intuitive tracking of the literature insufficient. It is emphasised that the systematic nature of a literature review promotes the most complete and nuanced knowledge of the phenomenon under study. The conclusions of the article emphasise the need to use literature reviews in contemporary scientific research, despite their high labour and time intensity.

Keywords: Systematic literature review, Databases, Research methodology, Empirical research, Theoretical framework

JEL Classification: M10, M12, L20, D23