

QR Method: A Step-by-Step Guide to Writing a Narrative Review

Método QR: Guía paso a paso para escribir una revisión narrativa

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ABSTRACT

Introduction: Narrative reviews have been widely used in research, but they lack standardized methods, especially in the social sciences and humanities. Hence, the objective of establishing the QR method (Questions & Reproducibility) is to improve the rigor and transparency of these reviews.

Methods: The study adopted a qualitative approach and longitudinally used the systematization of experiences in five editions of a scientific writing course. A total of 126 social science and humanities students participated, forming a training group. In addition, interviews with experts and bibliometric analysis were conducted.

Results: The findings show that the application of the QR method significantly improves the quality of narrative reviews, highlighting a higher index of (1) structure, (2) argumentative coherence, (3) methodological rigor and traceability, and (4) effective completion. Interviews with experts confirmed the need to provide narrative reviews with clear methodological structures that respect their interpretive flexibility, highlighting the principles of guiding questions and reproducibility as central axes. Bibliometric analysis revealed sustained growth in this type of review, with a predominance in biomedical areas and scarce representation in the social sciences, as well as a notable absence of specific methodological guidelines, reinforcing the relevance of the proposed method.

Conclusion: The QR method has established itself as an effective approach for narrative reviews, improving their clarity, replicability, and standardization, and enabling them to constitute a theoretical-contextual synthesis based on the best available scientific evidence. The study has some limitations, like the small number of experts interviewed and the focus on social sciences and humanities, which limits how much it can be generalized. It's recommended to validate the QR method in other disciplines and real publishing contexts. Future research could follow up on its application in high-impact journals and AI-assisted environments.

KEYWORDS: systematic review; narrative review; scoping review; scientific article; scientific writing

RESUMEN

Introducción: Las revisiones narrativas han sido ampliamente utilizadas en la investigación, sin embargo, carecen de métodos estandarizados, especialmente en el área de las ciencias sociales y humanidades. De allí el objetivo de establecer el método QR (Question and Reproducibility), para mejorar el rigor y transparencia de estas revisiones.

Métodos: El estudio adoptó un enfoque cualitativo y empleó la sistematización de experiencias de forma longitudinal en cinco ediciones de un curso de redacción científica. Participaron 126 estudiantes de ciencias sociales y humanidades, con quienes se conformó un grupo formativo; además, se realizaron entrevistas a expertos y un análisis bibliométrico.

Resultados: Los hallazgos evidencian que la aplicación del método QR mejora significativamente la calidad de las revisiones narrativas, destacando un mayor índice de (1) estructura, (2) coherencia argumentativa, (3) rigor metodológico y trazabilidad, y (4) finalización efectiva. Las entrevistas a expertos confirmaron la necesidad de dotar a las revisiones narrativas de estructuras metodológicas claras que respeten su flexibilidad interpretativa, destacando los principios de pregunta rectora y reproducibilidad como ejes centrales. El análisis bibliométrico reveló un crecimiento sostenido de este tipo de revisión, con predominio en áreas biomédicas y escasa representación en ciencias sociales, así como una notoria ausencia de directrices metodológicas específicas, reforzando la pertinencia del método propuesto.

Conclusión: El método QR se consolida como una ruta eficaz para las revisiones narrativas, al mejorar su claridad, replicabilidad y estandarización, y permitir que estas se constituyan en una síntesis teórico-contextual sustentada en la mejor evidencia científica disponible. El estudio presenta como limitaciones el reducido número de expertos entrevistados y el enfoque centrado en ciencias sociales y humanidades, lo que limita la generalización. Se recomienda validar el método QR en otras disciplinas y contextos reales de publicación. Futuras investigaciones podrían dar seguimiento a su aplicación en revistas de alto impacto y entornos asistidos por inteligencia artificial.

PALABRAS CLAVE: revisión sistemática; revisión narrativa; revisión de alcance; artículo científico; redacción científica

AUTHOR CONTRIBUTIONS

Conceptualization and/or research design:

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Data acquisition:

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Data analysis and interpretation:

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Writing and/or critical revision of the manuscript:

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INTRODUCTION

Despite the exponential growth in the number of narrative reviews in scientific databases over the last five years, many lack a standardized structure that facilitates their understanding and monitoring, with few studies developing clear methodologies. Significant progress has been made in globally recognized structured methodologies for conducting systematic reviews and meta-analyses (Page *et al.*, 2021), even in how to search for literature on them (Gusenbauer & Gauster, 2025), Scope Reviews (Arksey & O'Malley,

2005; Tricco *et al.*, 2018), Bibliometric Analysis (Donthu *et al.*, 2021), and Integrative Review (M. A. Cronin & George, 2023). However, narrative reviews remain less explored and have faced recurring criticism regarding their consistency and reproducibility.

There are two standard types of reviews: narrative reviews, also known as traditional or non-systematic reviews; and systematic reviews, which may or may not be followed by a meta-analysis. A narrative review is the «older» format of the two and presents a summary and (non-systematic) analysis of the available literature on a specific topic of interest. Interestingly, probably because the «approach» is not systematic, there are no formally recognized guidelines for writing narrative reviews. (Gregory & Denniss, 2018, p. 893)

These two standard types of reviews (a) systematic and (b) non-systematic or narrative are recognized worldwide by several authors (Cipriani & Geddes, 2003; Ferrari, 2015; Gregory & Denniss, 2018; Rother, 2007) and it is generally assumed that narrative reviews provide interpretation and criticism, while systematic reviews focus on very specific questions and summarize data (Greenhalgh *et al.*, 2018).

According to Chaney (2021), systematic reviews employ a rigorous and well-defined approach, beginning with a formulated research question and allowing for qualitative and/or quantitative analysis. In contrast, there are few formally recognized guidelines for writing narrative reviews, which often address multiple questions more subjectively and typically do not specify the criteria used for selecting and retrieving studies.

For example, there are narrative review articles that do not include a methodology section, but rather a series of accounts under various headings (McLean *et al.*, 2019). Some studies are called narrative reviews but internally follow the same guidelines as the PRISMA methodology (Ghasemi *et al.*, 2020). Therefore, formal guidelines are required for narrative reviews, promoting greater rigor, consistency, and transparency in their development.

At the same time, it has been revealed that one of the most cited narrative reviews worldwide explains throughout the text the authors' approach to reviewing and synthesizing the available evidence on asymptomatic SARS-CoV-2 infection, organizing the text according to the IMRD structure (Oran & Topol, 2020). This reflects the importance of making the review and synthesis process explicit in narrative reviews, which contributes to their credibility and scientific usefulness. However, the lack of formal guidelines hinders the standardization of this type of study, reinforcing the need for clear methodological frameworks for their development.

Narrative Review: Traditions, Advances, and Limitations

Over the last few decades, narrative review has played a central role in the construction of scientific knowledge, particularly in the field of medicine, where it has achieved a greater degree of formalization and editorial standardization. However, alongside these

established traditions, new methodological needs are emerging from the social sciences and humanities, which call for more flexible, interpretive, and critical approaches. This tension between medical traditions and emerging needs in other disciplinary fields has motivated the development of alternative proposals such as the QR method.

Narrative review is a widely used strategy, and among the most influential contributions is the SANRA scale (Scale for the Assessment of Narrative Review Articles), which is highly cited and inspired by medical literature reviews. This proposal fills a gap in the evaluation of non-systematic reviews through six items that allow for the assessment of aspects such as objectives, search strategy, and level of evidence, to standardize editorial criteria and improve methodological transparency (Baethge *et al.*, 2019).

Other relevant studies in this field offer principles for structuring a narrative review as opposed to systematic reviews, which are useful for modern authors, although they do not include a formal evaluation scale (Basheer, 2022). For its part, the importance of narrative review as a flexible strategy in medical and scientific education is emphasized, highlighting its value as a form of qualitative narrative knowledge (Sukhera, 2022).

Among the highly cited studies, one stands out that focuses on the writing of narrative reviews in clinical research, considered a benchmark for its clarity in the preparation and organization of the manuscript (Ferrari, 2015). Similarly, Green *et al.* (2006) conduct a detailed analysis of the process of writing narrative reviews for peer-reviewed journals, emphasizing the need to standardize this type of article to increase its objectivity. This work is widely recognized for its influence on editorial practice.

Other texts that complement the biomedical framework include the study of Gregory & Denniss (2018), Aimed at new authors interested in choosing and writing narrative or systematic reviews through key questions and practical steps, as well as the article on Murphy (2012), which presents essential recommendations for writing an effective review, Gasparyan *et al.* (2011) focus on the editorial and ethical considerations specific to biomedical review, while Bahl (2023) provides a step-by-step guide that emphasizes the importance of organization, critical analysis, and clarity of argumentation.

In a more cross-cutting sense, the study of Pautasso (2019) proposes a ten-step structure for developing narrative reviews, covering everything from topic selection and search strategy to critical and coherent manuscript writing, making it a resource that can be adapted to fields beyond medicine. Finally, Baumeister & Leary (1997) explain the roles, advantages, common mistakes, and practical tips for writing narrative reviews, and it is a classic reference text on the subject.

Despite the relevance of all these contributions, the vast majority arise from the biomedical context, which raises the need to explore more flexible approaches that respond to the particularities of the social sciences and humanities. In these fields, scientific narrative tends to be more interpretive, critical, and contextual, requiring models that allow for greater methodological freedom, but at the same time demonstrate rigor and replicability.

In this scenario, the QR method emerges as an original proposal conceived from the social sciences and humanities, aimed at organizing the narrative review process based on guiding questions and a coherent argumentative sequence. This method maintains criteria of clarity and reproducibility and adapts to the interpretive nature of these disciplines. In addition, it offers a guide for structuring reviews in contexts where the rigid frameworks typical of medicine do not predominate, thus constituting an added value for researchers in areas such as education, philosophy, or history, while remaining applicable to other areas of knowledge.

Despite contributions such as the SANRA scale (Baethge *et al.*, 2019), in the social sciences and humanities, there is a continuing need to strengthen transparency and reproducibility in narrative reviews, as their validity depends on methodological rigor. These studies are often conducted using informal and subjective criteria, without detailing the selection and analysis processes, which favors bias and limits the scientific usefulness of their conclusions (Akobeng, 2005, p. 845).

A narrative review article is a dynamic and non-linear process, but it needs to be stated and documented (Chaney, 2021, p. 3047). However, it has been shown that many synthesis methods, including narrative reviews, have weak methodological operationalization, with little guidance for various stages of the process, which limits their reproducibility and makes them difficult for other researchers to apply, despite the contextual richness they can offer (Tricco *et al.*, 2016).

A narrative review is a type of literature review that provides an overview of a specific topic, often from a theoretical and contextual perspective. It has a flexible structure, which allows for a broader and more interpretive discussion of the literature (Henry *et al.*, 2018; Smith & Duncan, 2022). They can be used for multiple purposes, such as presenting original research, reviewing critical topics for academic journals, creating introductory chapters for theses, or completing class assignments (Theile & Beall, 2024) play a crucial role in informing practice and guiding research, especially when high-quality evidence is scarce (Alajami, 2021; Smith & Duncan, 2022).

Baumeister & Leary (1997, p. 311) argue that «narrative reviews serve a vital scientific function, but few resources help people learn how to write them». Based on the above and considering that some topics are better covered as a narrative review (Murphy, 2012), New guidelines are being proposed to guide these studies in a rigorous and structured manner, ensuring consistency, transparency, and robustness. This would maximize their scientific contribution and facilitate their reproducibility, thereby responding to criticism regarding their methodological inconsistency.

For Chaney (2021, p. 3045): "Narrative Review articles have become very popular, and although there are high-quality and very useful narrative reviews, most are superficial, prone to errors, and useless". The absence of criteria leads to a clear bias in the author's

interpretation and conclusions, so even though they may be based on evidence, they are not truly useful as scientific evidence (Pae, 2015).

Chaney (2021) reiterates that a quality review article must meet three key standards: (1) address a field with sufficient prior research for a valuable synthesis, (2) perform rigorous compilation and analysis with in-depth coverage and compelling writing, and (3) offer meaningful new insights by comparing multiple studies. The latter is the most challenging, as it requires recognizing non-obvious connections and developing novel concepts. Without these elements, the review is reduced to a simple summary with no added value.

“Systematic reviews generally follow the traditional IMRD format, whereas narrative reviews do not have a structured format” (Chaney, 2021, p. 3046). This is one of the main limitations that often confronts us when faced with an ambiguous and difficult-to-follow text. This lack of clear structure can affect the coherence and quality of the analysis, making it difficult to identify the key contributions of the study. In this sense, adopting the IMRD structure in the narrative review could provide an organizational framework that improves the clarity, systematicity, and usefulness of the text, facilitating its understanding and evaluation.

The IMRD structure in narrative reviews

Author Edna Terezinha Rother argues that narrative review articles traditionally adopt a qualitative approach structured into sections: Introduction, Development, and Conclusions (Rother, 2007). However, this scheme has limitations, especially in terms of methodological explicitness, which is often absent, vague, or implicit within the text. In this regard, we propose the use of the IMRD format for narrative reviews, which not only provides greater clarity and structure to the presentation of findings but also strengthens methodological rigor, facilitating transparency in the selection and analysis of literature.

It should be noted that writing an article requires adequate knowledge and techniques; otherwise, there is a risk of producing not a scientific article but a simple opinion piece (Weilenmann, 2014). In this regard, we agree with authors who state that “[...] in the anatomy of a scientific manuscript, one expects to find an initial summary that concisely outlines the content of the research. This is followed by the introduction, materials and methods, results, discussion [...]” (Eslava-Schmalbach & Gilberto Gómez-Duarte, 2013, p. 79), this calls for reflection on the relevance of the IMRD structure or format.

The structure known as introduction, methods, results, and discussion (IMRD) has become the most widely used standard in current scientific discourse in the sciences (Sollaci & Pereira, 2004). This structure organizes the writing by requiring specific elements for each section, forcing the researcher to reflect on and refine their text. However, “IMRD is not a straitjacket; it leaves plenty of room for creativity and innovation” (Wu, 2011, p. 1347).

Researchers, especially novice researchers, need to understand the structure of research article sections. An interesting study analyzes lexical distribution in citation contexts within the IMRD structure. The analysis of verbs in different sections of scientific articles demonstrates that language use varies depending on the position of the citation in the text. The findings highlight the importance of the IMRD format for structuring scientific argumentation and clarifying the purpose of bibliographic references, reinforcing its value as a standard in academic communication (Bertin & Atanassova, 2014).

In this regard, Robert Day states that “[...] the simple logic of the IMRD helps authors organize and write their text, editors, reviewers, and directors in their review, and readers in their reading of the article” (Day, 2005, p. 7) and emphasizes that this logic can be defined by a series of key questions for each section of the scientific text:

- **Introduction:** What issue (problem) was studied?
- **Methods:** How was the problem studied?
- **Results:** What were the results or findings?
- **Discussion:** What do these results mean?

These four key questions for each section of the manuscript coincide with those proposed by another study, which also highlights the need to apply the three fundamental principles of scientific writing: precision, clarity, and brevity (Lam Díaz, 2016). “As with any other type of research work, IMRD also requires a good understanding of its main parts, the structure of its different sections, and the use of the most appropriate language” (Teodosiu, 2019, p. 201)

Nowadays, to keep their knowledge up to date in each field, scientists have to examine the data contained in many articles. Consequently, scientists and, naturally, directors must demand a data communication system that is uniform, concise, and easily understandable (Day, 2005, p. 12). In this context, the IMRD structure has become established as a standard that facilitates the organization and understanding of scientific articles, benefiting both the academic community and positioning itself as highly valuable even for interdisciplinary work (Yang *et al.*, 2025). Thus, considering that writing review articles is a useful skill in a scientific career, and that a review that offers a comprehensive, balanced, and engaging overview of a topic is a valuable resource that is often widely consulted and cited, even years after its publication (Dhillon, 2022), The objective of this study is to provide a step-by-step guide to writing a narrative review.

Objective:

Establish the QR method (QUESTIONS & REPRODUCIBILITY) to improve the rigor and transparency of narrative reviews.

METHOD

This research is conducted following the methodological guidelines proposed by Murillo *et al.* (2017), by this proposal, this section is organized into the following sections: (1) Methodological approach, which defines the general perspective adopted to address the research problem; (2) Categories of analysis, which guide the interpretation of the data; (3) Participants, which describes the population and/or sample involved; (4) Information gathering instruments, which details the tools used for data collection; (5) Fieldwork, which outlines the conditions and procedures of the collection process; and (6) Data analysis, which explains the techniques used to examine the information collected.

Methodological approach

This study adopts a qualitative approach. It is a longitudinal study covering the period 2020-2024 to establish (designing, applying, and evaluating) the QR (Question/Reproducibility) method for writing narrative reviews, based on a didactic intervention in five editions that has facilitated reflection in and from the writing process, and promote continuous improvement of the proposed method.

A qualitative experience systematization design was used, in which teachers and students applied the QR method within a scientific writing course that has had five editions. Adjustments and validations were made based on the participants' experience, combining practical learning with critical analysis of the results obtained. The QR method proposes a structured and transparent way of conducting narrative reviews, mitigating the bias associated with subjectivity and the lack of explicit methodology. It is based on two fundamental pillars: QUESTIONS & REPRODUCIBILITY.

QUESTIONS

This phase corresponds to the clear definition of the systematization criteria, research questions, and procedure (see example in Table 1). It is important to emphasize that this phase focuses on the “WHAT” being investigated. Research questions should be formulated to guide the reading and analysis process. These questions can be flexible and adjusted during the process, allowing the search to be refined and reconstructed according to the context and findings.

| SYSTEMATIZATION CRITERIA | RESEARCH QUESTION (RQ) | PROCEDURE |
|---------------------------------|--|--|
| Conceptual framework | RQ: What is the conceptual framework surrounding studies of [topic] in higher education? | Analysis of co-occurrences of key terms and concepts; automatic coding of keywords and subtopics. |
| Methodological approaches | RQ: What are the predominant methodological approaches in [topic]? | Qualitative analysis and categorization of methodological approaches present in the literature. |
| Impact and contribution | RQ: What is the impact of [topic] on the academic community? | Evaluation based on the number of citations, impact index, and recognition in the literature. |
| Challenges and future proposals | RQ: What are the main challenges and future proposals in the field of [topic]? | Synthesis of critical debates and proposed solutions present in the literature, identification of gaps, and recommendations for future research. |
| Theoretical dimensions | RQ: What are the main theoretical dimensions that shape the field of [topic]? | Identification and synthesis of conceptual frameworks, foundational theories, and interpretive |

| | | |
|----------------------------|--|---|
| | | approaches. |
| Influence of A on B | RQ: How does [A] influence [B] within the field of [topic]? | Review of empirical and theoretical studies that analyze causal relationships, correlation, or interaction. |
| Best practices | RQ: What good practices have been documented around the implementation or study of [topic]? | Review of successful experiences, institutional guidelines, and recommendations in specialized literature. |

Table 1. Research Question
Source: Author's elaboration

REPRODUCIBILITY

This phase refers to methodological transparency, ensuring replicability. It follows a dynamic and iterative sequence (see Table 2).

| INDICATOR | DESCRIPTION | WEIGHT (%) |
|--|--|------------|
| Formulation of the search equation (mandatory) | It involves identifying relevant keywords and descriptors, as well as constructing the search equation using Boolean operators (AND, OR, NOT), truncations (*), quotation marks for exact phrases, and other special characters, according to the specific syntax of each database. Example: "emotional intelligence" AND "social work" AND students* AND ("well-being" OR "competencies") NOT "early childhood education" | 25 % |
| Database selection (mandatory) | Choose scientific databases such as Scopus, Web of Science, SciELO, PubMed, among others. | 10 % |
| Filters application. (mandatory, apply at least one filter) | Apply filters by text fields (title, abstract, and keywords) within the databases. Although this filter is usually preconfigured by default on academic platforms such as Scopus, it is important to note its use. | 10 % |
| | Types of documents: Articles, reviews, books, chapters, conference proceedings, etc. | 5 % |
| | Analysis period: Time range (e.g., 2020–2025). | 5 % |
| | Subject areas: Field delimitation (Education, Psychology, Social Work, etc.). | 5 % |
| | Country/Territory/Region: Geographic context. | 5 % |
| | Language: Languages of publication. | 5 % |
| | Type of access: Open Access, Gold, etc. | 3 % |
| | Stage of publication: Finalized documents versus in press. | 2 % |
| Duplicate detection | If multiple or heterogeneous sources are used. Process for identifying and eliminating repeated references when combining multiple sources, ensuring a refined corpus without redundancies. | 5 % |
| Implementation of complementary strategies | Apply methods such as manual search, snowballing, repositories, gray literature, or alerts to expand and validate the corpus, identifying studies omitted by the automated search. | 10 % |
| Prioritization of studies (mandatory) | Sort and prioritize the studies obtained according to criteria such as quality, impact (citations, impact factor, altmetrics), thematic relevance, methodological relevance, etc. | 10 % |

Table 2. Sequence for Reproducibility in Narrative Reviews
Source: Author's elaboration

The methodological sequence of a narrative review begins with the formulation of a clear search equation, which defines the conceptual and methodological framework of the study. Relevant databases are then selected to ensure access to high-quality and pertinent literature. Subsequently, filters are applied to refine and clean the corpus, ensuring thematic relevance and reducing noise. Duplicate records are removed either manually or using tools such as EndNote, Mendeley, or Rayyan, and complementary strategies are incorporated to expand and validate the search. Finally, studies are ranked based on explicit criteria of relevance, quality, and impact, allowing for a justified final selection and a coherent analytical focus.

Specifically, the proposed sequence of the QR Method would be as follows:

1. Formulation of the search equation (mandatory)
2. Selection of databases (mandatory)
3. Application of filters (mandatory, apply at least one filter)
4. Detection of duplicates
5. Evaluation of complementary strategies
6. Hierarchization and final selection of studies (mandatory)

A qualitative assessment of methodological reproducibility based on levels and percentages of compliance is proposed. The basic level requires at least 60 % compliance, which must include four key indicators: formulation of the search equation (25 %), selection of databases (10 %), application of filters (10 %), and ranking of studies (15 %). The intermediate level, ranging from 70 % to 84 %, also incorporates several complementary criteria (such as duplicate detection, additional search strategies, or specific filters), with a reasonable methodological justification. Finally, the advanced level involves compliance between 85 % and 100 %, characterized by the comprehensive and explicit development of most or all the indicators, with high traceability, argumentative coherence, and replicability. This classification allows the evaluation to be adapted to the flexible nature of narrative reviews without compromising minimum standards of methodological rigor.

It is important to note that this process is not linear or rigid, but rather flexible, dynamic, and iterative. The phases feed into each other and can be adjusted as the review progresses. For example, the results obtained by applying filters or complementary strategies may highlight the need to reformulate the search equation or expand the databases consulted. This iterative feature allows the process to be adapted to the complexity of the topic, ensuring a more rigorous, contextualized review that is open to continuous improvement.

The process begins with the formulation of the search equation and the selection of databases. In this initial stage, descriptors and keywords are defined, and search equations are constructed using Boolean operators and other specific characters, ensuring a precise and reproducible search. Special characters and operators are key tools for optimizing searches in scientific databases such as Scopus, Web of Science, PubMed, EBSCO, and ProQuest. Among the most common are quotation marks (" ") for exact phrases, the asterisk (*) for truncation, the question mark (?) as a wildcard, and parentheses () to group terms. Boolean operators (AND, OR, NOT), proximity operators (NEAR/# or W/#), the plus sign (+), and square brackets [] to delimit fields are also used. Although these tools are widely applied, each database may have its variations, so it is advisable to consult its advanced search guide.

Unlike the PRISMA approach, which places duplicate detection at the beginning of the process, the QR method proposes applying it after filtering, reducing the document volume, enhancing traceability, and optimizing analysis without relying on external tools. Reproducibility requires clearly stating how, with what, where, and when the review is conducted, including the use of Boolean operators, explicit selection criteria, relevant databases, and tools such as Mendeley, Zotero, ATLAS.ti, or NVivo. It is also essential to disclose any use of artificial intelligence or specialized software at any stage of the review process.

Participants

The study involved a total of 126 participants across five editions of the scientific writing course, all of whom were affiliated with the fields of social sciences and humanities. Additionally, interviews were conducted with five experts in academic writing to evaluate the applicability and impact of the QR method. These experts, based in Cuba, Spain, Brazil, Ecuador, and the United States, include two with experience as editors of high-impact journals and three with extensive experience as peer reviewers. All of them hold doctoral degrees, have more than 20 years of experience in university teaching, and have published scientific articles in high-impact academic journals.

Instruments

Training group

The training group was the key technique developed within the scientific writing course. In this space, participants not only acquired theoretical knowledge about writing narrative reviews but also practically applied the QR method, allowing them to evaluate its impact on the quality and organization of the articles produced.

During the sessions, synchronous feedback was encouraged, in which teachers and students analyzed the progress of their narrative reviews. This process made it possible to identify common difficulties, clarify doubts about the use of the QR method, and adjust according to the emerging needs of the participants.

The training group provided relevant information on the challenges students face when writing narrative reviews, and key inputs were collected to validate the relevance and applicability of the QR method. This dynamic training facilitated a learning process based on interaction, critical reflection, and the progressive improvement of the texts that were gradually being generated. The course dynamics required weekly submission of a draft of the article, feedback, and corrections until the final product, which was the complete narrative review article, was achieved.

Interview with experts in scientific writing

To further analyze narrative reviews and their methodology, five experts in academic writing were interviewed. The analysis focused on three fundamental questions that had been defined beforehand: (1) the types of reviews most used in scientific literature and the place occupied by narrative reviews, (2) trends in narrative reviews, and (3) methodological criteria or guidelines for improving consistency in this type of review.

About the predominant types of review in academic production, the experts discussed which are the most used and to what extent narrative reviews have been considered within knowledge synthesis approaches. Their positioning in comparison with systematic and scoping reviews was addressed, as well as perceptions of their structure and methodological rigor.

About the evolution and distribution of narrative reviews, the growth of these publications in recent years and their prevalence in different disciplines were examined. An analysis was conducted of the areas of knowledge in which they have had the greatest presence and the factors that have favored or limited their development.

Finally, in terms of methodological criteria and guidelines, strategies were discussed to strengthen their structure, improve their reproducibility, and ensure the transparency of the review process. The importance of formulating well-defined research questions and explicitly documenting each stage of the process was explored to increase the consistency and academic validity of this type of review. The findings provided key inputs for the readjustment of the QR method, highlighting the need for a structured approach that improves traceability and methodological rigor in the construction of narrative reviews.

Bibliometric analysis: theoretical-empirical triangulation

To contrast and complement the contributions of experts in scientific writing, a theoretical-empirical triangulation approach was used, combining the analysis of bibliographic sources with the perspectives obtained in the interviews. In this process, bibliometric analysis was used as a technique for systematically exploring scientific output on narrative reviews, allowing trends and patterns in the academic literature to be identified. The triangulation between bibliographic sources and expert contributions helped to consolidate a more robust methodological framework for the development of the QR method.

The bibliometric analysis aligned with the aspects discussed with the experts, focused on answering three key questions:

What are the most commonly used types of reviews in scientific literature based on Scopus? The frequency and distribution of different types of reviews (systematic, scoping, critical, narrative, among others) were analyzed, as well as the place of narrative reviews within academic production.

What has been the evolution, thematic, geographical, and editorial distribution of narrative reviews in scientific literature? The temporal evolution of narrative reviews was analyzed to assess their growth over time. The distribution by subject area allowed us to identify the disciplines in which these reviews are most frequent, while the geographical distribution examined the concentration of publications by leading countries and institutions. Finally, the editorial distribution included an analysis of the journals with the highest volume of publications in narrative reviews, allowing us to identify trends in the most influential publishers.

What methodological criteria, guidelines, or insights do studies on narrative reviews offer? We explored the methodological recommendations found in the scientific literature on narrative reviews to identify guiding principles and best practices to improve their rigor and reproducibility.

Fieldwork

The study was conducted within the framework of a scientific writing course that has five official editions. Throughout this process, experiential and reflective learning were encouraged, allowing participants to explore various strategies for writing review articles. Participants were divided into two groups:

1. **Intervention group**, which applied the QR method in the development of their narrative review, following a guided structure and documenting each stage of the process.
2. **Non-intervention group**, which conducted their narrative review without a structured methodology, allowing for a comparison between approaches.

Data analysis

Data analysis was carried out using a thematic analysis and methodological triangulation approach, integrating information obtained through the training group, interviews with experts, and bibliometric analysis. This strategy allowed us to identify patterns, compare perspectives, and validate the relevance of the QR method in writing narrative reviews.

First, a thematic analysis was applied to the qualitative data collected in the training group. The interactions between participants, progress in writing their articles, and difficulties reported during the implementation of the QR method were examined. This allowed for the extraction of emerging categories related to structural clarity, argumentative coherence, and traceability of the writing process.

On the other hand, the information obtained from the interview with experts was analyzed using an open coding process, in which the main contributions on the current state of narrative reviews, their evolution in scientific literature, and methodological recommendations to strengthen their rigor were identified. Subsequently, these categories

were compared with the findings of the training group to assess their applicability in a training context.

The bibliometric analysis provided empirical validation of the trends observed, allowing the qualitative findings to be placed in a broader framework. Term frequency and co-occurrence network analysis techniques were applied to map the evolution of narrative reviews, their concentration in different areas of knowledge, and their geographical and institutional representation.

Finally, a data triangulation process was carried out, integrating the findings of the three approaches to generate a comprehensive view of the impact of the QR method on the writing of narrative reviews. This strategy strengthened the validity of the study by corroborating the consistency of the results from multiple sources of evidence, ensuring a robust and well-founded analysis.

RESULTS

Transforming narrative review: Evidence from the training group

The findings reveal a recurring pattern of behavior in both working groups (QR method group and non-QR method group), with significant differences between the two groups in terms of structural coherence, methodological clarity, and article completion.

Article completion: More than 90 % of participants who used the QR method managed to complete their narrative review, while the group that did not apply the QR method had a considerably lower completion rate (30 %). Participants in the latter group reported difficulties in defining the scope of their review, organizing information coherently, and synthesizing findings in a structured manner.

Structure and organization: The articles produced using the QR method were more clearly and systematically organized, structured around the IMRD model (Introduction, Methodology, Results, and Discussion). The application of this structure allowed the texts to have:

- A well-defined introduction, with a well-structured theoretical foundation and a clear objective.
- An explicit methodology with a clear formulation of the research question and documentation of the selection and analysis of the literature.
- An organized results section, with an argumentative synthesis.
- A discussion based on the reviewed evidence.

In contrast, the texts in the group without the QR method showed greater variability in their structure, with omissions and inconsistencies in the presentation of findings. Articles without an explicit methodology were identified, which made it difficult to understand

the literature selection process, and discussions were poorly articulated due to the lack of a solid analytical framework.

Clarity and argumentative coherence: The articles developed using the QR method exhibited greater clarity and argumentative coherence, as participants were able to better define their object of study and construct a logical narrative throughout the document. The application of the IMRD scheme facilitated the structuring of the discourse, avoiding digressions and redundancies. In contrast, the texts of the group without a structured methodology showed scattered arguments and a lack of a common thread, which made it difficult to understand the content.

Methodological rigor and traceability: The QR method allowed the articles generated to undergo a more transparent and replicable literature selection and analysis process, explicitly documenting the sources and criteria used at each stage. In the group without a defined methodology, there was a lack of clarity in the selection of references and a lack of justification for the inclusion of studies, which affected the traceability of the review process.

The findings highlight the effectiveness of the QR method in producing more organized, clear, and complete narrative reviews. The adoption of the IMRD structure within the QR method not only facilitated the organization of the content but also ensured that each section fulfilled a specific function in the construction of the argument.

In contrast, the absence of a defined methodological framework in the non-intervention group revealed challenges such as difficulty in structuring content, delimiting the literature search, and ensuring the coherence of the study. These results reinforce the need to provide narrative reviews with a structured methodology that improves their rigor and reproducibility, ensuring their academic validity in the context of scientific production.

In the formative feedback spaces, students were initially encouraged to identify an existing method for structuring their reviews, such as analysis-synthesis. However, this approach created difficulties, as they felt that forcing the application of a specific method distracted them from the natural review process and imposed a rigid structure that limited their ability to analyze.

Over time, it was emphasized that the main objective was to document the actual process they were following, ensuring the traceability of their work. If a participant used a specific method in their review, they incorporated it into the elements of reproducibility, but without this becoming a requirement that restricted the flexibility of the narrative approach. This strategy allowed students to focus on developing a narrative review with greater transparency and coherence without feeling conditioned to adopt methodological structures that were foreign to their process.

The researcher constructs and decides their path, but declares it ethically and transparently. Thus, the QR method does not impose a rigid structure, but rather strengthens the interpretive and contextual nature of the narrative review, providing it

with greater clarity, coherence, and traceability. Its added value lies in the fact that it allows for a balance between flexibility and methodological rigor, ensuring that each decision made by the researcher in the review process is explicit, justifiable, and reproducible, without sacrificing the analytical depth characteristic of this type of review.

Based on continuous improvement in the different editions of the course, an article template and a reproducibility guide have been established (see supplementary files). In summary, the IMRD structure of a narrative review with the specific parameters of each section is presented below (see Table 3).

| | SECTION OF TEXT | DETAIL |
|------------------------|---|--|
| Preliminary | Title | You must explicitly state that it is a narrative review to differentiate it from other types of reviews. |
| | Author details | First and last names, ORCID, institutional email, and affiliation. |
| | Abstract | Background, Objective, Method (explaining the QR method), Results, and Conclusions. |
| | Keywords | List the five keywords of your study. |
| I | Introduction and literature review | Argue the necessity and relevance of the topic (problematization). Argue the scientific nature of the topic and present the general question that will guide the review (theorization). |
| M | Method | Describe the QR method, explaining the research questions and reproducibility, to argue the feasibility and applicability of the study (instrumentation). |
| R | Results | Answer specific questions through integrated analysis of selected studies. |
| D | Discussion | Provide a critical interpretation of the findings about the scientific literature. |
| Closing Section | Conclusions, limitations, and prospects | Summarize the main contributions and findings of the review. |
| | References | Accurately cite the references used in the study. The use of bibliographic managers such as Zotero or Mendeley is recommended. |
| | Declaration of conflicts of interest | The authors should clarify whether or not any personal, institutional, or financial interests may have influenced the study. |
| | CREDIT taxonomy | The specific contributions of each author are detailed according to the guidelines of the Contributor Role Taxonomy (CRediT): Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project management, Software development, Resources, Supervision, Validation, Visualization, Original draft writing, Review and editing of the manuscript. |

Table 3. Structure of a narrative review

Source: Author's elaboration

From intuition to structure: Dialogue with experts in scientific writing

Based on interviews with five experts in scientific writing, key information was obtained on the current situation of narrative reviews, their evolution and trends, as well as the methodological criteria necessary to strengthen their rigor and reproducibility.

The experts agreed that systematic reviews are the most prevalent in scientific literature, and they believe that this is due to their well-defined protocols and high reproducibility. In contrast, they noted that narrative reviews often lack a standardized methodological structure, which limits their recognition in high-impact journals and their acceptance as a source of scientific evidence.

It was noted that, unlike systematic reviews, which follow strict guidelines such as PRISMA, narrative reviews often depend on the author's criteria, which can lead to bias.

They agree that narrative reviews lack transparency in the selection and analysis of the literature and emphasize the need to provide these reviews with a structured guide that facilitates their traceability and methodological rigor, without compromising their flexibility and interpretive capacity.

They identified sustained growth in the production of narrative reviews in recent years, attributable to the exponential increase in scientific output and the need to integrate large volumes of information into theoretical syntheses. However, they noted that their distribution is not uniform across disciplines and geographical areas, with Latin America being underrepresented.

The experts agreed that a well-conducted narrative review must comply with the two essential principles of the QR Method: start with a clear question and ensure the reproducibility of the process.

QUESTIONS

The importance of formulating well-defined research questions was emphasized, as these constitute the central axis that guides the selection, analysis, and interpretation of the literature in a narrative review. "A clear and specific question allows the scope of the study to be defined, precise search criteria to be established, and ensures that the synthesis of information responds to a defined purpose" E1.

"When research questions are too broad or ambiguous, there is a risk that the review will become an arbitrary compilation of information without a clear thread, hindering the coherence of the argument and the depth of the analysis" E2. In this regard, the experts recommended that questions be specific, feasible, and relevant, aligned with the objectives of the study, and formulated in such a way as to identify the most relevant sources.

In addition to guiding the selection of documents, the research question also guides how the selected texts are analyzed, allowing the key aspects within the reviewed studies to be focused on. "For example, if the purpose of the review is to evaluate the effects of a psychoeducational intervention on student well-being, the focus is directed directly to specific sections of the text that contain that information, rather than being scattered across other less relevant elements" E3. "In this way, an appropriate formulation not only facilitates the organization of the review process but also optimizes the extraction of information and the construction of knowledge from the existing literature" E4.

The experts also addressed the importance of structuring questions: "For example, 'How does education influence student development?' is too general or ambiguous a question, as it does not specify what level of education, what type of development (cognitive, social, emotional), or what educational approaches are being considered. A well-defined question would be: How does project-based learning impact the development of social-emotional skills in secondary school students? E5

This version of the question is more specific, as it specifies:

- The educational approach (project-based learning)
- The aspect to be analyzed (development of social-emotional skills)
- The population of interest (secondary school students)

In this way, a well-formulated question allows for the selection of literature to be guided in a precise and structured manner, avoiding disordered or overly extensive reviews. To formulate a clear and well-defined question in a narrative review, a structure based on the following key elements can be followed:

Based on the contributions of experts, various structures were defined for formulating research questions in narrative reviews, each adapted to different methodological approaches and needs.

TACA (Topic, Approach, Context, Aspect of analysis) is ideal for exploratory and theoretical narrative reviews, as it allows for a clear definition of the phenomenon under study, the theoretical lens applied, the context in which it is examined, and the specific aspect to be analyzed. For example, a question framed with this model might be: *“How has emotional intelligence been conceptualized in the educational field from the perspective of cognitive psychology?”* Here, the topic is emotional intelligence, the approach is cognitive psychology, the context is education, and the aspect of analysis is conceptualization.

PCE (Population, Concept, Environment), inspired by the PICO model, is particularly useful for reviews that seek to analyze conceptual trends within specific populations. This model enables precise identification of the target group, the central concept, and the setting. For instance: *“How have active learning methodologies been implemented in higher education globally?”* In this case, the population is higher education, the concept is active methodologies, and the environment is the global academic context.

REA (Relationship, Evidence, Applicability) is appropriate for examining the connection between two or more variables, the supporting literature, and its applicability in specific contexts. An example of this would be: *“What is the relationship between project-based learning and the development of socioemotional skills in university students, according to recent literature?”* This formulation emphasizes the variables involved, references empirical studies, and defines a clear scope of application.

TAPTA (Topic, Approach, Population, Target aspect, Timeframe) is designed for reviews that investigate the evolution, impact, or trends of a phenomenon over time. It allows for a precise definition of the object of study, the theoretical or methodological perspective, the population, the specific focus, and the temporal range. For example: *“How have cooperative learning strategies evolved to enhance student motivation in secondary education over the past decade?”* This question specifies the topic (cooperative learning strategies), the approach (their impact on motivation), the population (secondary students), the target aspect (evolution), and the timeframe (the past decade).

CADA (Concept, Approach, Dimensions, Applicability) is well suited for reviews aiming to identify and define the theoretical dimensions of a given concept. This structure

organizes the question around four core elements: the concept being analyzed, the theoretical perspectives applied, its constituent dimensions, and the contexts in which it has been studied. For example: *"What are the theoretical dimensions of critical thinking according to the literature in education and psychology?"* Here, the concept is critical thinking, the approach involves education and psychology, the dimensions are theoretical constructs, and the applicability relates to those academic fields.

Each of these models helps tailor the formulation of research questions to the type and purpose of the narrative review, ensuring clarity, coherence, and methodological consistency.

REPRODUCIBILITY

To enhance reproducibility, it was recommended that each stage of the literature selection and analysis process be explicitly documented. There was a collective agreement that this involved:

1. Identification of descriptors or variables: Define the main keywords related to the topic, including central categories or variables within the field of study. For example, in a review on emotional intelligence in social work, potential descriptors might include: "emotional intelligence", "social work", "competencies", "interventions", "well-being", among others.
2. Construction of the search equation: Use quotation marks, Boolean operators, and special characters to build precise and reproducible search queries. Example: "emotional intelligence" AND "social work" AND students AND ("well-being" OR competencies*) NOT "early childhood education"*.
3. Selection of databases: Choose multidisciplinary and subject-specific databases aligned with the review topic. Examples include Web of Science, Scopus, SciELO, ERIC, and PubMed.
4. Field filtering: Apply filters by document fields –such as title, abstract, or keywords– to ensure the presence of key terms in relevant sections. Filtering by title is particularly recommended to enhance specificity and alignment with the research focus.
5. Document type: Specify the types of documents to be included –e.g., research articles, book chapters, conference proceedings, books, etc –.
6. Time frame: Define the period of the review according to thematic relevance. For instance: 2020–2024.
7. Subject areas: Focus the search results by selecting specific disciplines such as Social Sciences, Health Sciences, Psychology, or Education.

8. Geographical scope: If the interest is region-specific, select by country or continent.
9. Language: Choose document languages according to the researcher's comprehension needs and the intended scope of the review.
10. Access type: Indicate the access type (e.g., Open Access, Gold, Hybrid Gold, Bronze, Green) based on availability requirements.
11. Publication stage: Distinguish between finalized documents and those in press.
12. Study ranking: Organize the final set of studies using criteria such as thematic relevance, citation count, publication year, access type, or other relevant indicators.

These criteria contributed to the development and refinement of the QR method (Question/Reproducibility) during the implementation of the scientific writing course. Participants—students conducting narrative reviews in fields such as education, psychology, social sciences, and medicine—applied this approach in practice. Dialogue with experts further enriched the method, incorporating more precise strategies to ensure reproducibility and improve narrative coherence. The QR method proved effective in providing narrative reviews with an explicit methodological structure that supports transparency, rigor, and traceability, without compromising interpretative flexibility. Experts emphasized that this method enhances the academic legitimacy of narrative reviews and strengthens their applicability across disciplines, consolidating the QR approach as a valid methodological tool within scientific knowledge production.

Based on the work carried out with experts, it became evident that, in addition to traditional structured searches in academic databases, there are complementary strategies for locating and selecting literature that may be particularly relevant in narrative reviews:

1. **Open exploratory search:** This involves a broad search using engines such as Google or Google Scholar, entering key terms without a predefined structure. From the results, relevant sources are selected, allowing the discovery of literature not captured by more structured searches.
2. **Snowballing or citation tracking:** This strategy involves reviewing the reference lists of key articles identified in the initial search to find earlier relevant studies. It may also include tracking more recent studies that cite those key articles.
3. **Exploration of institutional repositories and grey literature:** This includes consulting theses, technical reports, preprints, and documents from international organizations that can provide valuable information but are not always indexed in traditional databases.

4. **Consultation with experts and academic networks:** Engaging with specialists in the field can help identify relevant literature, including ongoing work or publications in less accessible outlets.
5. **Manual search in specialized journals, institutional repositories, and publishers:** This involves reviewing recent issues of key scientific journals in the field, as well as searching institutional repositories and publishers' platforms, considering that not all journals from a given publisher (e.g., SAGE, SPRINGER) are indexed in the same database.
6. **Use of alerts and recommendation systems:** Alerts can be set up in platforms such as Google Scholar, Scopus, or Web of Science to receive notifications about new studies related to the search terms. Additionally, article recommendation tools such as ResearchGate or Semantic Scholar can be used.

Each of these strategies can strengthen the literature review by expanding coverage and reducing selection bias. All search and selection procedures must be explicitly reported in the **Methodology** section to ensure transparency. It is important to emphasize that these strategies should be applied exclusively to the literature that will be included to address the research questions.

Narrative reviews in figures: Production, distribution, and methodology

What are the most commonly used types of reviews in scientific literature?

To ensure rigor and accuracy in identifying the different types of reviews present in scientific literature, experts in the field were first consulted, who provided an initial classification based on their experience and specialized literature. This classification was then validated by searching the Scopus database, using the descriptors corresponding to each type of review and limiting the search exclusively to the "title" field. This strategy made it possible to optimize the specific text and results, avoiding biases derived from tangential mentions in the abstracts or the body of the text, and ensuring that the studies retrieved had an explicit orientation toward scientific review methodology.

Figure 1 shows the diversity of review approaches in scientific literature, highlighting the predominance of systematic reviews and meta-analyses.

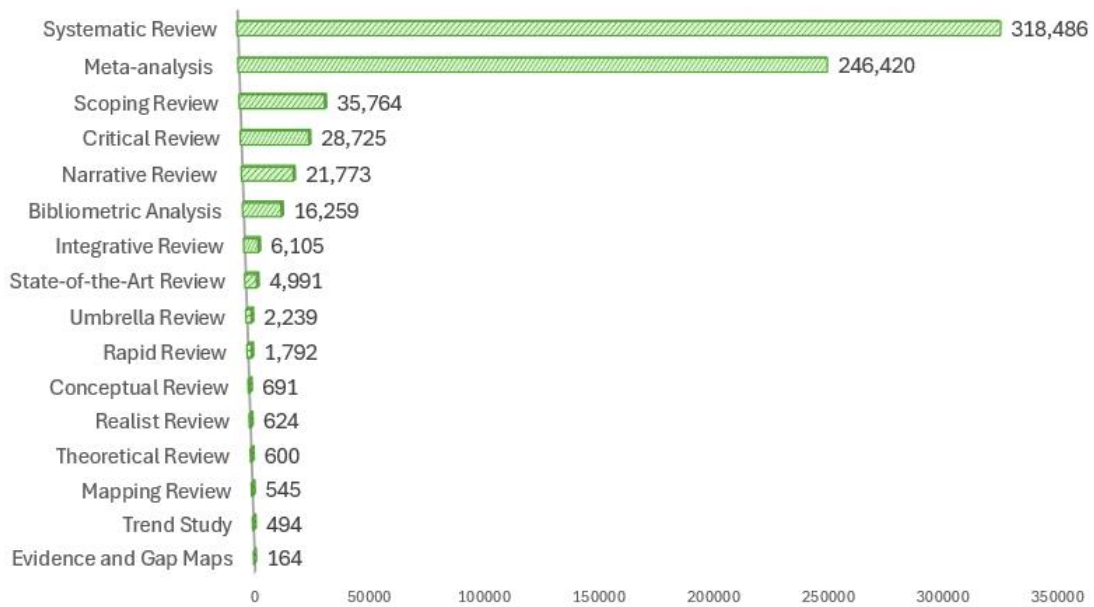


Figure 1. Frequency by type of review article in Scopus
Source: Author's elaboration based on data from Scopus

Despite this wide variety of reviews, a tendency among students to confuse terms and methodologies was identified, using them as synonyms or without a clear understanding of their differences, not distinguishing between these approaches or defined methodological structures, which affects the rigor and reproducibility of their work.

What has been the evolution and distribution of narrative reviews by subject area and geography?

Based on Scopus and the search equation TITLE (“narrative review”), the first narrative review took place in 1987, and until 2004, these productions did not reach 10 articles per year; however, since 2005, the number of narrative reviews has experienced progressive and sustained growth, steadily and gradually. In 2020, more than 1,000 narrative reviews were recorded for the first time. Since then, their production has multiplied, exceeding 5,000 articles in 2024 (see Figure 2).

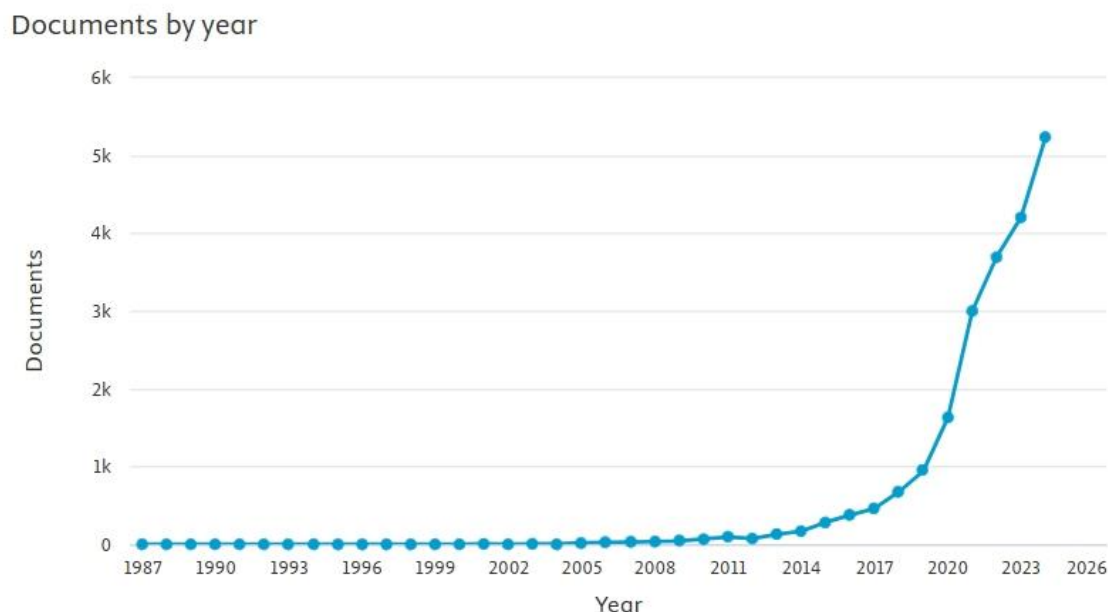


Figure 2. Evolutionary trends of narrative reviews
Source: Scopus

The leading institution in narrative reviews is Harvard Medical School, with the United States, Italy, and the United Kingdom producing the most, while Latin American countries have a low representation. In terms of subject areas, more than 50 % of production is concentrated in the field of medicine, followed by biochemistry, genetics and molecular biology, nursing, health professions, and neuroscience, while only 3.5 % corresponds to the field of social sciences. About the journals that publish the most narrative reviews (see Figure 3).

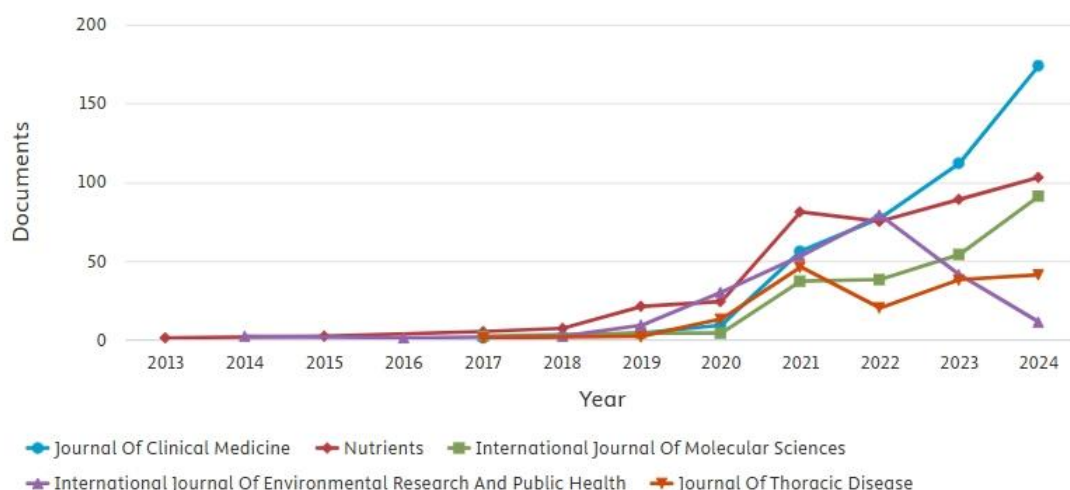


Figure 3. Journals that publish the most narrative reviews
Source: Scopus

As of the cutoff year 2024, the leading journal in this segment is *Journal of Clinical Medicine* (435), followed by *Nutrients* (408), *International Journal of Molecular Sciences* (230), *International Journal of Environmental Research and Public Health* (228), and *Journal of Thoracic Disease* (161), published by Pioneer Bioscience Publishing Company (PBPC).

What methodological criteria, guidelines, or insights do narrative review studies offer?

To answer this question, narrative review articles were classified into two groups: (1) narrative reviews on specific topics and (2) narrative reviews that provide methodological guidelines on this type of review. The 2,000 most cited narrative review articles in Scopus were analyzed (see Figure 4).





| | Document title | Authors | Source | Year | Citations |
|-------------------------------|---|---|--|------|-----------|
| <input type="checkbox"/> 1 | Article • Open access Prevalence of asymptomatic SARS-CoV-2 infection. A narrative review | Oran, D.P., Topol, E.J. | Annals of Internal Medicine , 173(5), pp. 362–368 | 2020 | 1,423 |
| | Show abstract  View at Publisher Related documents | | | | |
| <input type="checkbox"/> 2 | Review • Open access Challenges and burden of the Coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: A narrative review to highlight clinical and research needs in the acute phase and the long return to normality | Fegert, J.M., Vitiello, B., Plener, P.L., Clemens, V. | Child and Adolescent Psychiatry and Mental Health , 14(1), 20 | 2020 | 1,234 |
| | Show abstract  View at Publisher Related documents | | | | |
| <input type="checkbox"/> 3 | Review How to Do a Systematic Review: A Best Practice Guide for Conducting and Reporting Narrative Reviews, Meta-Analyses, and Meta-Syntheses | Siddaway, A.P., Wood, A.M., Hedges, L.V. | Annual Review of Psychology , 70, pp. 747–770 | 2019 | 1,197 |
| | Show abstract  View at Publisher Related documents | | | | |
| <input type="checkbox"/> 2000 | Review Self-management assessment in multiple chronic conditions: A narrative review of literature | Ko, D., Bratzke, L.C., Roberts, T. | International Journal of Nursing Studies , 83, pp. 83–90 | 2018 | 36 |
| | Show abstract  View at Publisher Related documents | | | | |

Figure 4. Representation of articles analyzed in Scopus
Source: Scopus. Date: November 18, 2024

This analysis revealed that only 12 articles belong to the second group (see Table 4), which is less than 1 %, highlighting the scarcity of literature focused on the methodological structuring of narrative reviews. This finding underscores the need to develop clearer and more widely accepted guidelines to improve the rigor and transparency of this type of review.

| N.º | Authors | Citations |
|-----|-----------------------------------|-----------|
| 1 | (Siddaway <i>et al.</i> , 2019) | 1197 |
| 2 | (Baumeister & Leary, 1997) | 741 |
| 3 | (Greenhalgh <i>et al.</i> , 2018) | 532 |
| 4 | (Wong <i>et al.</i> , 2013) | 415 |
| 5 | (Collins & Fauser, 2005) | 352 |
| 6 | (Rother, 2007) | 316 |

| | | |
|----|---------------------------------|-----|
| 7 | (Pae, 2015) | 139 |
| 8 | (Sukhera, 2022) | 85 |
| 9 | (Cipriani & Geddes, 2003) | 71 |
| 10 | (Cordeiro <i>et al.</i> , 2007) | 71 |
| 11 | (Eguía, 2014) | 43 |
| 12 | (Teagarden, 1989) | 42 |

Table 4. Relevant authors with methodological contributions**Source:** Scopus. Cut-off date: November 18, 2024

Future studies aim to analyze narrative reviews on specific topics (which constitute the majority) and extract from them the methodological criteria and synthesis strategies used to ensure rigor and consistency in the construction of knowledge. Meanwhile, the present study emphasizes narrative reviews that directly provide methodological guidelines and have had the explicit objective of developing guidelines, reflections, and methodological criteria on the process of conducting a narrative review itself.

DISCUSSION

Guidelines, methodological criteria, and reflections on the narrative review

For this first stage of the discussion section, we will look at the guidelines, methodological criteria, and reflections found in the previously selected studies.

Narrative reviews synthesize studies and are particularly useful for interconnecting research to develop or evaluate theories. Their value lies in how each piece of evidence contributes to theoretical construction. In addition, they can offer a historical account of the evolution of a theory or line of research (Siddaway *et al.*, 2019). This type of article is therefore configured as an interconnected narrative of scientific evidence.

Narrative reviews must specify the scope of the question and level of abstraction, allowing broader questions to be addressed than an empirical study, by analyzing patterns and connections between findings. While an empirical study only suggests theoretical implications, a narrative review can facilitate more informed conclusions (Baumeister & Leary, 1997).

Narrative reviews require (1) a focused research question, (2) greater methodological explicitness, and (3) less likelihood of bias. They should construct a solid and convincing argument based on an informed synthesis of the evidence. Narrative reviews should use inclusion/exclusion criteria, but their focus is on the essential tasks of induction and interpretation to advance theoretical understanding. They aim to authentically present both the underlying evidence, including primary research, and the selection and analysis process that supports their conclusions, based on interpretive understanding and critical reflection (Greenhalgh *et al.*, 2018). Therefore, they cannot be superficial or improvised “light methodologies” that lack structure and rigor.

Narrative reviews also include a series of more generic styles such as the “critical review” or “integrative review” (Greenhalgh *et al.*, 2018). Therefore, it is evident that

among the five most widely disseminated types of review articles in the literature, narrative reviews are those that lack the most robust and clear guidelines. An interesting study introduces the term "meta-narrative review", describing it as an approach that aims to illuminate a heterogeneous topic area by highlighting the contrasting and complementary ways in which researchers have studied the same or similar subjects. The authors point out that no prior publication standards exist for reporting meta-narrative reviews and propose a set of reporting guidelines developed as part of the **RAMESES project** – Realist And Meta-narrative Evidence Syntheses: Evolving Standards – (Wong *et al.*, 2013).

Other authors advocate balancing the strengths of systematic and narrative reviews (Collins & Fauser, 2005). This approach highlights the possibility that narrative reviews can incorporate a certain methodological rigor without losing their interpretive flexibility; narrative reviews can benefit from structured strategies to improve consistency and transparency in knowledge synthesis, without being limited to a rigid framework of analysis. Narrative literature review articles are publications that describe and discuss the state of science on a specific topic or subject from a theoretical and contextual point of view (Rother, 2007).

According to Rother (2007), narrative reviews lack an explicit description of the databases used, the methodological approaches employed, and the inclusion criteria for the articles retrieved. This limitation must be overcome by incorporating greater transparency into the search and selection process, specifying the databases consulted (such as Scopus, Web of Science, PubMed, or ERIC) and defining clear criteria for the inclusion and evaluation of the literature.

For this author, the narrative review does not describe the methodological approach that would allow data reproduction or answer specific research questions (Rother, 2007). Hence, the relevance of the QR Method, which complements these aspects.

Author Chiun Pae argues that the absence of objective and systematic selection criteria in narrative reviews leads to methodological deficiencies that can introduce bias into interpretation and conclusions. Although they may be based on evidence, their lack of rigor in the selection and evaluation of studies limits their usefulness as scientific evidence (Pae, 2015). To strengthen its validity, greater transparency must be incorporated into the review method, including specifying the databases used (such as Scopus, Web of Science, PubMed, or ERIC) and defining clear inclusion and evaluation criteria.

The basic problem with unsystematic data mining is that, beneath the shiny surface, it seems that authors who use it often fail to understand the true value, underlying meanings, and correct nature of the data, or its true limitations and strengths, and often go too far or fall short with their interpretation (Pae, 2015). It is a call to resolve the issue of reproducibility as a highly valuable methodological element.

Another author highlights several key elements for a rigorous narrative review. First, it is essential to establish a clear rationale for choosing this type of review over others,

considering the two main approaches to reviewing literature: narrative reviews and systematic reviews (Cipriani & Geddes, 2003). In addition, precision is required in terms of limits, scope, and definitions, which allows the object of study to be delimited and ensures consistency. Justification of inclusion and exclusion criteria is essential to ensure the relevance of the selected studies. Likewise, the review should incorporate reflexivity and an assertion of saturation or sufficiency, which strengthens the validity of the conclusions. Finally, it is crucial to detail the methods of analysis and interpretation, as well as to recognize distinctive methods and subtypes within narrative reviews (Sukhera, 2022).

This approach emphasizes the importance of a narrative review of systematic reviews, considering their methodological differences, strengths, and limitations. In addition, it provides criteria for structuring the narrative rigorously, integrating historical background, key definitions, and their impact on evidence-based practice (Cordeiro *et al.*, 2007).

According to Eguía (2014), narrative reviews are a type of review in which the authors do not declare the methods they used to obtain and select the information. Therefore, according to the hierarchy of evidence, they are at the bottom of the pyramid (exposed to the possibility of presenting a high risk of bias, mainly due to their subjectivity and lack of methodology).

A study that looks at where narrative reviews are headed concludes that the growing support for meta-analysis suggests that narrative reviews have lost much of their usefulness. It indicates that the exponential increase in medical literature has made this method inadequate for accurately synthesizing primary research. As the complexity and volume of studies continue to grow, so does the risk of misinterpretation and bias (Teagarden, 1989). However, narrative research is becoming more relevant, but it needs to be strengthened through greater transparency in its selection criteria, a more defined methodological structure, and a critical approach to the interpretation of findings. Far from being obsolete, narrative review remains a valuable tool for integrating knowledge, if strategies are adopted to reduce bias and improve its methodological rigor.

The relevance of Questions & Reproducibility

As previously noted, —particularly by Eguía (2014)— one of the main limitations of narrative reviews is the lack of an explicit methodology guiding the collection and selection of information. This shortcoming places narrative reviews at the lowest level of the evidence hierarchy due to the high risk of bias introduced by subjectivity and the absence of systematic analytical criteria.

In response to this challenge, the **QR method (Questions & Reproducibility)** is proposed as a structured approach to enhance the transparency and rigor of narrative reviews. This method is based on two fundamental principles:

1. **Questions:** The review should begin with clearly formulated questions that guide the search and selection of literature, avoiding arbitrary information gathering.

2. **Reproducibility:** The process of identifying, selecting, and synthesizing sources must be explicitly detailed, enabling other researchers to replicate or evaluate the review.

The QR method does not aim to turn a narrative review into a systematic review, but rather to provide it with a structure that minimizes the risks of bias and subjectivity. Its implementation strengthens the credibility of findings and facilitates their use as a foundation for future research. In a narrative review, the author can and should construct a tailored methodological pathway but must explain it. The process should not be mechanically tied to rigid search equations; multiple strategies can be explored and refined, but the researcher has a responsibility to document, step by step, how the review was conducted.

QUESTIONS

A widely cited study points out that, due to the complexity of the topics and research questions, a narrative review was chosen as the method (Fegert *et al.*, 2020). This highlights the potential of narrative research to address complex issues, allowing for the flexible integration of diverse sources and perspectives. Its ability to analyze broad contexts and generate new interpretations makes it a valuable tool for exploring multidimensional phenomena.

A proposal for more informative abstracts in narrative review articles suggests including the objective, data sources, selection criteria, analysis methods, results, and conclusions. This improves the identification of rigorous studies and strengthens peer review (Mulrow *et al.*, 1988).

An interesting article refers to the need to use a question to guide the non-systematic narrative literature review, and indicates that to answer this question, the literature must be reviewed to identify the most significant studies and theoretical foundations related to the topic (Ghasemi *et al.*, 2020).

Sarkar & Bhatia (2021) recognize the relevance of narrative reviews in the current era of sophisticated research methodologies and have attempted to describe in detail the process involved in writing a narrative review, indicating that narrative reviews provide a concise review of the literature with the freedom to raise questions and stimulate future research, and reaffirming that the process of writing a good narrative review involves formulating a research question, deciding on the most appropriate methodology, reviewing the literature, representing the evidence, and preparing a draft.

The text by Gregory & Denniss (2018) is of great methodological value for this study, as it directly answers the question: How to write a narrative review?

1. Formulate a research question
2. Search and re-search literature

3. Adopt a critical perspective
4. Establish a logical structure
5. Review the review

REPRODUCIBILITY

About reproducibility, author Christine M. Murphy recommends three key aspects for a narrative review: 1. Provide full disclosure of the search methods used to allow for greater transparency and reproducibility; 2. Use at least two databases for the search, and 3. Convey a clear message (Murphy, 2012).

Narrative reviews remain valuable in fields where systematic reviews may not be feasible or where a broad, interpretive approach is needed to synthesize existing knowledge (Henry *et al.*, 2018; Smith & Duncan, 2022). Best practices for conducting a narrative review include standardization and rigorous preparatory work. Standardizing the publication of narrative descriptions of the literature helps to increase objectivity and reduce bias. Likewise, following detailed instructions and a «best evidence synthesis» approach, starting with adequate preparation, is essential to ensure the quality and clarity of the analysis (Green *et al.*, 2006).

Thus, a narrative review is a flexible type of literature review that provides a theoretical and contextual understanding of a specific topic and therefore requires an established methodology for collecting and presenting evidence, as it can often be biased and less reproducible compared to systematic reviews. Standardization and adequate preparatory work are crucial for conducting a high-quality narrative review (Alajami, 2021; Green *et al.*, 2006; Henry *et al.*, 2018; Smith & Duncan, 2022; Theile & Beall, 2024).

The preparatory work requires defining the scope, clearly outlining the topic and objectives of the review (Callcut & Branson, 2009; Skelly *et al.*, 2019), as well as conducting exhaustive searches using databases such as MEDLINE, EMBASE, Scopus, and Web of Science, as well as manual searches and authoritative texts (Crowther, 2013; Skelly *et al.*, 2019). Literature lessons are also required, based on inclusion and exclusion criteria that minimize bias (Green *et al.*, 2006; Koretz & Lipman, 2017), choosing studies that provide the best evidence and are most relevant to the review topic (Callcut & Branson, 2009; Skelly *et al.*, 2019).

The main findings, methodologies, and conclusions of the selected studies should be summarized about data extraction and synthesis (Callcut & Branson, 2009; Skelly *et al.*, 2019) and integrated the findings into a coherent narrative, highlighting common themes, trends, and gaps in the literature (Callcut & Branson, 2009; Kuhberger *et al.*, 2016; Skelly *et al.*, 2019).

Then, the content must be organized, structuring the review with clear sections that follow the IMRD format, such as introduction, methods, results, and discussion (Kuhberger *et al.*, 2016; Skelly *et al.*, 2019). It is essential to critically evaluate the quality

and relevance of the studies included (Callcut & Branson, 2009; Skelly *et al.*, 2019) and use figures and tables to summarize key points and improve readability (Skelly *et al.*, 2019).

Finally, the draft can be sent for peer review and the necessary revisions made based on the comments, as well as ensuring that ethical standards are maintained throughout the review process (Crowther, 2013). By following these steps, authors can create a well-structured and informative narrative review that contributes valuable information to the literature (Callcut & Branson, 2009; Crowther, 2013; Skelly *et al.*, 2019).

Best practice recommendations for a narrative review include employing an effective literature search strategy and focusing on the dynamics of writing, organizing, analyzing, and synthesizing the text (Ferrari, 2015). Once a topic has been chosen, the author or authors must identify the type of review article to be written and its objective, considering, for example, that systematic reviews and narrative reviews differ in their objectives, methods, and areas of application (Chaney, 2021).

A narrative review involves defining topics for exploration, searching for and retrieving literature, analyzing and synthesizing data, and writing and reporting within a limited time frame (P. Cronin *et al.*, 2008). When conducting a narrative review, it is important to consider the purpose of the review, the specific format required for its intended use, and the inclusion of different components in the research and writing process (Theile & Beall, 2024). In addition, authors should be aware of the potential biases and challenges associated with narrative reviews and strive to improve the objectivity and transparency of their reviews (Alajami, 2021; Kuhberger *et al.*, 2016). Assessing the quality of evidence is an important but difficult task (Kmet *et al.*, 2004).

CONCLUSIONS

The QR method enables narrative reviews to uphold methodological rigor by minimizing bias and ensuring both credibility and replicability. While it does not seek to transform the narrative review into a systematic one, it does aim to provide greater coherence and methodological robustness. In today's research landscape—marked by artificial intelligence and an increasing demand for research traceability—narrative reviews must reaffirm their scientific legitimacy, with reproducibility becoming a central concern.

Unlike a mechanical or rigid procedure, reproducibility in narrative reviews is a living, dynamic, reflective, and critical process. The researcher not only analyzes and synthesizes the literature but also makes their analytical path explicit, documenting the strategies used, decisions made, and challenges encountered. This record allows for the visibility of uncertainties and reflections that have shaped the review process.

In the context of artificial intelligence, traceability is essential to establish authorship and integrity in narrative reviews. Documenting every decision, strategy, and reflection helps demonstrate how the analysis was constructed, distinguishing human effort from any AI involvement. Additionally, explicitly stating when and how AI tools were used enhances

transparency and reinforces research ethics, ensuring that the review is not only rigorous but also reproducible and legitimate. This transparency strengthens the credibility of the narrative review and transforms it into an authentic exercise in knowledge creation, allowing readers to understand both the conclusions and the path taken to reach them.

The QR-based narrative review draws an analogy with the logic of a traditional QR code in terms of traceability and access to knowledge. Just as scanning a QR code leads to a predefined and reproducible outcome for any user, the QR approach in narrative reviews ensures that the documented process enables other researchers to follow the analytical path and arrive at verifiable conclusions.

Overcoming the traditional perception that narrative reviews lack method and are not reproducible is crucial in the current context of scientific scrutiny, traceability, and AI integration. A well-founded narrative review must explicitly detail its analytical process – from the formulation of questions to the synthesis of information, ensuring transparency and enabling verification of its findings. Recognizing and structuring its methodology not only reinforces its scientific legitimacy but also enhances its reproducibility, making the generated knowledge understandable, verifiable, and valuable for future research.

Although the study provides relevant evidence on the development and application of the QR method in narrative reviews, it has some limitations that should be acknowledged. First, although expert validation was obtained through interviews with academic editors and reviewers, the number of experts was small (five), which may limit the diversity of approaches to its applicability in other disciplines. Second, all participants belonged to a scientific writing course focused on social sciences and humanities, so the generalization of the results to other fields such as natural sciences or engineering should be done with caution. Third, although the method was applied and evaluated in an educational setting, its external validation through independent studies or its application in real scientific publication processes would further strengthen its robustness and usefulness.

For future research, we suggest exploring the implementation of the QR method in broader academic contexts and different disciplines beyond the social sciences and humanities. It would also be relevant to develop longitudinal studies that analyze its sustained impact over time on methodological rigor and transparency in narrative reviews. A complementary line of research would be to track and analyze articles that have applied the QR method and have been published in high-impact journals, to evaluate its applicability in demanding publishing environments. Finally, it is recommended to compare its effectiveness with other existing review frameworks and examine its adaptability in contexts assisted by artificial intelligence in academic writing.

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QR Method

A Step-by-Step Guide to Writing a Narrative Review

Created by:
Angel Deroncele-Acosta

TITLE

Titles must be 10–15 words and explicitly indicate that the article is a Narrative Review.

Example 1:

Ethics as a Transversal Dimension in Social Sciences and Humanities: A Narrative Review

Example 2:

A Narrative Review of Generative Artificial Intelligence in Social Sciences and Humanities Research

Example 3:

Good Teaching Practices for the Development of Critical Thinking in Higher Education: Narrative Review

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ABSTRACT

Background: Brief contextualization of the topic and identification of the literature gap.

Objective: General purpose of the review.

Method: Brief description of the QR method (research questions and reproducibility criteria).

Results: Main findings of the narrative analysis.

Conclusions: Synthesis of the study's contribution and its relevance.

Keywords: keyword 1, keyword 2, keyword 3, keyword 4, keyword 5.

1.- INTRODUCTION

Contextualization and Problematicization: Presents the need and current relevance of the topic, justifying the significance of the review.

1.1 Literature Review

Theoretical Background: Summarizes previous studies and establishes the scientific foundation of the topic.

Research Objective: States the general objective that guides the search and selection of literature.

2.- METHOD

2.1 QR Method Description

QR Method

A Step-by-Step Guide to Writing a Narrative Review

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For this narrative review, the QR (Questions & Reproducibility) Method was used, a strategy aimed at rigorously and transparently systematizing the available scientific literature on [topic]. This method is structured around two complementary components: (a) the formulation of key questions based on previously defined systematization criteria, which allows the body of documentation to be organized and analyzed from various theoretical, methodological, and contextual dimensions; and (b) the principle of reproducibility, which involves a detailed description of the search strategy, inclusion and exclusion criteria, databases consulted, period of analysis, and the use of technological tools for information management and analysis. This methodology ensures the consistency of the process, its replicability by other researchers, and the validity of the interpretive analysis that characterizes narrative studies.

2.2 Questions

Define the systematization criteria, formulate the research questions, and specify the procedures that will be used to address them. Some examples are provided below (see Table 1).

Table 1. Research Questions

| Systematization criteria | Research Questions (RQ) | Procedure |
|---|---|---|
| Conceptual framework | RQ1: What is the conceptual framework surrounding studies of [topic] in higher education? | Analysis of co-occurrences of key terms and concepts; automatic coding of keywords and subtopics. |
| Documentary characteristics | RQ2: What is the distribution of scientific output on [topic] by document type? | Classification by document type (articles, reviews, conferences, book chapters, etc.) and year of publication. |
| | RQ3: What is the geographical distribution of scientific production on [topic]? | Identification of the country of affiliation of the first author and visualization using maps. |
| Subject areas | RQ4: What subject areas stand out in scientific research on [topic]? | Grouping by academic disciplines (computer science, education, humanities, etc.). |
| Cross-cutting competencies | RQ5: What are the cross-cutting skills associated with studying [subject]? | Categorization of competencies: critical thinking, ethics in the use of technology, interdisciplinary collaboration, etc. |
| Methodological and theoretical approaches | RQ6: What are the predominant methodological approaches in [topic]? | Qualitative analysis and categorization of methodological approaches present in the literature. |
| Impact and contribution | RQ7: What is the impact of [topic] on the academic community? | Evaluation based on the number of citations, impact index, and recognition in the literature. |
| Research methodologies | RQ8: What research methodologies have been used in studies on [topic]? | Review and summary of research designs, data collection techniques, and data analysis methods used in the studies. |
| Trends and evolution | RQ9: How has scientific output on [topic] evolved over the last 10 years? | Chronological and quantitative analysis of publications to identify temporal trends and growth patterns. |
| Challenges and future proposals | RQ10: What are the main challenges and future proposals in the field of [topic]? | Summary of critical debates and proposed solutions found in the literature; identification of gaps and recommendations for future research. |

QR Method

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| | | |
|-------------------------------|---|--|
| Theoretical dimensions | RQ11 What are the main theoretical dimensions that shape the field of [topic]? | Identification and synthesis of conceptual frameworks, foundational theories, and interpretive approaches. |
| Influence of A on B | RQ12 How does [A] influence [B] within the field of [subject]? | Review of empirical and theoretical studies analyzing causal relationships, correlations, or interactions. |
| Relationships between A and B | RQ13 What types of relationships have been identified between [A] and [B] in the literature on [topic]? | Comparison of models, conceptual maps, and research results linking both variables. |
| Good Practices | RQ14 What good practices have been documented regarding the implementation or study of [topic]? | Review of successful experiences, institutional guidelines, and recommendations in the specialized literature. |
| Pillars | RQ15 What are the fundamental pillars that support the development of the field of [topic]? | Categorization of key elements (principles, values, strategic approaches) common to various publications. |

2.3 Reproducibility

In a narrative review employing the **QR Method (Questions & Reproducibility)**, authors are expected to describe in detail the strategy for searching, locating, and selecting studies, ensuring both transparency and methodological rigor. This process requires clarifying how the literature was identified, which databases were consulted, the inclusion and exclusion criteria applied, and the procedures through which the final body of evidence was consolidated. The following steps specify the minimum requirements and recommended practices to achieve a systematic, reproducible, and coherent selection process.

1. Formulation of the search equation (mandatory)
2. Selection of databases (mandatory)
3. Application of filters (mandatory, apply at least one filter)
4. Detection of duplicates (only if applicable)
5. Evaluation of complementary strategies (only if applicable)
6. Hierarchization and final selection of studies (mandatory)

2.4 Technological Resources and Artificial Intelligence

Specify whether artificial intelligence (AI) tools have been used at any stage of the process, such as writing, editing, formulating the search equation, or preliminary analysis. Likewise, indicate the use of any software or application used for reference management (such as Zotero or Mendeley), document analysis, or information organization, including specialized platforms such as Covidence, Rayyan, EndNote, or other digital tools that have supported the methodological development of the review (VOSviewer, RStudio, etc.).

3.- RESULTS

Integrate the findings from the selected studies in an argumentative and coherent manner, highlighting how the evidence responds to the research questions and contributes to building a structured narrative. Depending on the objectives of the review and the complexity of the research questions, authors may choose between different ways of organizing the results (**see Table 2**):

Option A: Distribute the answers to the research questions between Results and Discussion, organizing them logically according to their level of complexity.

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Example: in a study on formative assessment (FA) and critical thinking (CT), the *Results section* is used to answer, first, what formative assessment is, then what critical thinking is; and the *Discussion section* analyzes how formative assessment contributes to the development of critical thinking as a purposeful outcome.

Option B: Present the answers to all research questions in the *Results section* and use the *Discussion section* to expand the critical analysis by incorporating additional sources.

Example: In a study on formative assessment and critical thinking, the *Results section* presents answers to questions such as what formative assessment is, what critical thinking is, and how formative assessment (FA) contributes to the development of critical thinking (CT). Then, in the *Discussion section*, this last point is explored in greater depth by contrasting the findings with additional literature and highlighting their theoretical and practical implications.

Finally, it is recommended to use tables, figures, and charts to represent, illustrate, and clarify the most relevant results, thereby enhancing the clarity and communicative value of the review.

Table 2. Result Organization in Narrative Reviews

| Option | Description | Applied Example (Formative Assessment and Critical Thinking) | Recommended Use |
|----------|--|--|---|
| Option A | Distribute the answers to the research questions between <i>Results</i> and <i>Discussion</i> , organizing them according to their level of complexity. | In <i>Results</i> : the review addresses what formative assessment is and what critical thinking is. In <i>Discussion</i> : it analyzes how formative assessment contributes to the development of critical thinking as a propositional outcome. | When the research questions have different levels of complexity, or when one of them implies an outcome or proposal. |
| Option B | Present all answers to the research questions in the <i>Results</i> section and use the <i>Discussion</i> section to expand the critical analysis by incorporating additional sources or perspectives. | In <i>Results</i> : the review addresses what formative assessment is, what critical thinking is, and how formative assessment contributes to the development of critical thinking. In <i>Discussion</i> : this last point is further explored by contrasting findings with additional literature and highlighting theoretical and practical implications. | When the goal is to centralize all answers in <i>Results</i> and use the <i>Discussion</i> as a space for contrast and critical reflection. |

The following is an example figure for a narrative review, provided as a reference only; authors should consider the most appropriate way to graphically represent their results.

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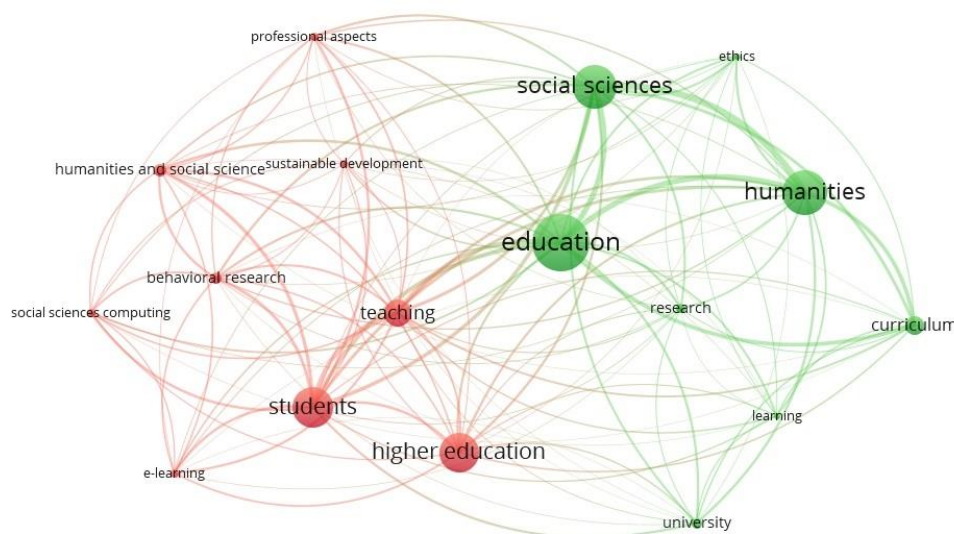


Figure 1. Keyword co-occurrence map in social sciences, humanities, and education

4.- DISCUSSION

The discussion section should provide a **critical interpretation** of the findings concerning existing literature. In **Option A**, this involves deepening the analysis of the most complex or propositional research questions, showing how the evidence connects with broader debates in the field. In **Option B**, the discussion expands on the results already presented, contrasting them with additional sources and highlighting both convergences and divergences with prior studies.

Implications: In both options, the discussion should emphasize the contributions of the review to the discipline, outlining its theoretical, methodological, and practical significance. It should also identify gaps that remain in the literature and suggest directions for future research.

CONCLUSIONS, LIMITATIONS, AND FUTURE PERSPECTIVES

Conclusions: Summarize the main contributions of the review and the answers provided to the research questions, highlighting the integrative value of the findings.

Limitations: Acknowledge the main constraints of the study, such as the scope of the literature analyzed, methodological restrictions, or contextual boundaries that may affect the generalization of results.

Future Perspectives: Suggest research lines that could further deepen the topic, emphasizing emerging questions, unexplored dimensions, or innovative methodological approaches that may strengthen the field.

REFERENCES

Provide a complete list of all the sources cited in the article, formatted according to the selected bibliographic style (e.g., APA, Vancouver, Chicago). The use of reference

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management software (e.g., EndNote, Mendeley, Zotero) is recommended to ensure accuracy, consistency, and adherence to journal guidelines.

DECLARATION OF CONFLICTS OF INTEREST

Authors must explicitly state whether there are any conflicts of interest related to the study. If no conflicts exist, the statement should read: *"The authors declare no conflicts of interest."*

CONTRIBUTOR ROLE TAXONOMY (CREDIT)

This section should declare the specific contributions of each author according to the CRediT Taxonomy. For each role, the initials of the contributing authors must be listed. In cases where a role does not apply to the development of the article (e.g., funding acquisition), it should be indicated as *N/A*. This practice ensures transparency and fair recognition of collaborative work.

1. Conceptualization (A.B.C; D.E.F; H.J.K)
2. Data Curation (A.B.C)
3. Formal Analysis
4. Funding Acquisition (N/A)
5. Investigation
6. Methodology
7. Project Administration
8. Software
9. Resources
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11. Validation
12. Visualization
13. Writing – Original Draft
14. Writing – Review & Editing