

Understanding Literature Reviews: Types, Methodologies, and Applications

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ABSTRACT

Literature reviews are integral to academic research, providing synthesised insights into existing knowledge while identifying gaps for future exploration. This paper explores various types of literature reviews, including narrative, systematic, meta-analyses, scoping, critical, and integrative reviews. Each type is characterised by distinct methodologies and purposes, ranging from providing broad overviews to rigorous synthesis of evidence and quantitative data analysis. Understanding these methodologies aids researchers in selecting appropriate review methods tailored to their research questions, thereby enhancing the quality and impact of their work across disciplines.

Keywords: Literature Review, Narrative Review, Systematic Review, Meta-Analysis.

I. Introduction

Literature reviews are a fundamental component of academic research, critically synthesising existing knowledge on a given topic (Paré & Kitsiou, 2017; Snyder, 2019; Atiku et al., 2023; Chigbu et al., 2023). They provide an overview of what is already known and identify gaps and inconsistencies in the literature, setting the stage for future research (Fink, 2014; Paré & Kitsiou, 2017; Chigbu et al., 2023). The ability to conduct an effective literature review is essential for researchers across all disciplines, as it enables them to build on existing knowledge and contribute new insights to their field (Torraco, 2016; Snyder, 2019). Different types of literature reviews serve various purposes and employ distinct methodologies. For instance, a narrative review provides a broad overview of a topic, summarising and synthesising findings from multiple studies without a strict methodological framework (Torraco, 2016; Paré & Kitsiou, 2017; Snyder, 2019). In contrast, a systematic review follows a rigorous, predefined protocol to answer specific research questions by critically appraising and synthesising evidence from relevant studies (Post et al., 2020). Understanding the limitations and complexities of each type is crucial for selecting the appropriate review method for a given research question.

Meta-analyses, a subset of systematic reviews, utilise statistical techniques to combine results from multiple studies, thereby providing a quantitative synthesis of the evidence (Johnson & Hennessy, 2019; Pigott & Polanin, 2019). This approach enhances the power and precision of findings, making it particularly valuable in fields such as medicine and psychology (Haidich, 2010; Pigott & Polanin, 2019; Hansen, Steinmetz & Block, 2022). Meanwhile, scoping reviews map the existing literature on a broad topic, identifying key concepts, theories, and knowledge gaps without assessing the included studies' quality (Arksey & O'Malley, 2005; Cacchione, 2016; Munn et al., 2018). Each type of review offers unique insights and serves different purposes within the research process. This paper aims to delineate the various types of literature reviews, detailing their distinct features, methodologies, and applications. This document aims to help researchers choose the best review approach for their research objectives by clearly explaining these various kinds, thus improving the calibre and significance of their work.

II. Literature Review

Literature reviews are essential in academic research because they provide organised methods for combining previous work. Among the various types of literature reviews, the narrative review distinguishes itself by providing a comprehensive understanding of a topic through summarising and synthesising findings from multiple sources. Unlike other review types, narrative reviews do not adhere strictly to a methodological framework, allowing authors the flexibility to critically analyse and interpret existing research in a more adaptable manner (Snyder, 2019; Torraco, 2016). In contrast, systematic reviews are designed to address precise research questions using a rigorous and predefined methodological approach. These reviews involve a comprehensive search strategy, clear selection criteria, and a meticulous appraisal of study quality, ensuring reproducibility and reliability (Johnson & Hennessy, 2019). Systematic reviews are particularly indispensable in fields like healthcare and social sciences, where robust evidence is crucial for informing practice and policy decisions and identifying gaps in current knowledge to guide future research (Post et al., 2020).

Meta-analyses represent a specialised subset of systematic reviews that utilise statistical techniques to amalgamate results from multiple studies, providing a quantitative synthesis of evidence. This approach enhances the power and precision of findings, which is particularly beneficial in medicine, psychology, and education, where quantitative data predominates (Pigott & Polanin, 2019). By calculating overall effect sizes, meta-analyses contribute to deriving more robust conclusions from existing research, thereby bolstering the reliability of study outcomes (Haidich, 2010). On the other hand, scoping reviews aim to map the breadth of existing literature on a broad topic, identifying fundamental concepts, theories, and knowledge gaps without necessarily evaluating study quality (Arksey & O'Malley, 2005; Cacchione, 2016; Munn et al., 2018). They offer a preliminary assessment of the breadth of available research, proving invaluable in nascent fields or where foundational concepts require clarification before undertaking more detailed reviews (Arksey & O'Malley, 2005; Cacchione, 2016). Scoping reviews are instrumental in understanding the extent and nature of evidence within a given area, setting the stage for subsequent systematic reviews or further in-depth research endeavours (Arksey & O'Malley, 2005; Cacchione, 2016; Munn et al., 2018).

Table 1. Characteristics, Limitations, and Opportunities of Different Types of Literature Reviews

Type of Literature Review	Limitations	Opportunities
Narrative Review	- Subjectivity: Relies heavily on the author's interpretation, introducing potential bias. - Lack of Rigor: May overlook important studies or fail to assess quality systematically. - Reproducibility: It is difficult for others to replicate the review process and verify findings.	- Flexibility: Suitable for emerging fields or developing topics. - Broad Overview: Provides a comprehensive understanding of the research landscape. - Theoretical Development: Helps in developing new theories or frameworks.
Systematic Review	- Resource Intensive: Requires significant time, effort, and resources. - Complexity: Involves complex and detailed procedures that may be difficult to implement correctly. - Scope Limitation: May be too narrow, excluding relevant studies outside predefined criteria.	- High-Quality Evidence: Provides a robust and unbiased synthesis of evidence. - Reproducibility: Follows a predefined protocol, making the review process replicable. - Identifies Gaps: Helps to identify research gaps and guide future studies.
Meta-Analysis	- Data Requirements: Requires numerical data from studies, limiting its applicability to quantitative research. - Heterogeneity: Variability among studies can complicate data synthesis.	- Enhanced Power: Increases the statistical power and precision of findings. - Quantitative Synthesis: Provides a robust quantitative synthesis of evidence.

	- Publication Bias: May be affected by the tendency to publish positive results more frequently.	- Strong Conclusions: Helps derive more reliable and generalisable conclusions.
Scoping Review	- Lack of Quality Assessment: Typically, it does not assess the quality of included studies. - Broad Scope: This may result in an overwhelming amount of information that is difficult to synthesise. - Preliminary Nature: Provides a preliminary assessment, which may need further detailed review.	- Mapping Literature: Useful for mapping existing literature on broad topics. - Identifying Gaps: Helps identify key concepts, theories, and knowledge gaps. - Foundation for Future Research: Sets the stage for more detailed systematic reviews or research.
Critical Review	- Subjectivity: Relies on the author's critical appraisal, which can introduce bias. - Complexity: Involves detailed theoretical and methodological critiques that may be complex. - Time-Consuming: Requires significant time to evaluate and synthesise studies thoroughly.	- In-depth Analysis: Provides a thorough analysis of research strengths and weaknesses. - Theoretical Advancement: Helps develop new theories or frameworks. - Challenge Paradigms: Advances knowledge by challenging existing paradigms and proposing new perspectives.
Integrative Review	- Methodological Variability: Integrating diverse methodologies can be challenging. - Complexity: Involves a complex process of synthesising qualitative and quantitative data. - Potential Bias: Subjective interpretation can introduce bias.	- Comprehensive Understanding: Integrating diverse methodologies provides a holistic understanding of a phenomenon. - Multidisciplinary Insights: Valuable in fields requiring integration of different methodological approaches. - Theoretical Integration: Helps integrate empirical and theoretical literature.

Literature reviews are pivotal in research across diverse fields, each serving distinct purposes and sectors. Narrative Reviews in humanities, social sciences, emerging research fields, and education offer thematic synthesis and historical context (Fink, 2014; Laher, Fynn & Kramer, 2019; Löblová et al., 2019; Sukhera, 2022). Systematic Reviews, integral to healthcare, medicine, social sciences, education, and policymaking, rigorously collect and analyse literature for comprehensive evidence synthesis (Fox, 2016; Xiao & Watson, 2017; Moosapour et al., 2021; Khoi Quan & Liamputtong, 2023). Meta-analysis extends systematic reviews in medicine, psychology, education, public health, and clinical research, quantitatively synthesising data for statistical insights (Xiao & Watson, 2017; Hansen, Steinmetz & Block, 2022; Haidich, 2010; Pigott & Polanin, 2019).

Scoping Reviews map the landscape in health sciences, social sciences, public health, environmental studies, and emerging areas, identifying gaps and clarifying concepts (Arksey & O'Malley, 2005; Cacchione, 2016; Munn et al., 2018; Wendelboe-Nelson et al., 2019; Tefera et al., 2023). Critical Reviews in humanities, social sciences, theoretical research, and cultural studies provide critical evaluation and alternative perspectives (Fink, 2014; Dodgson, 2021; Wright & Michailova, 2022). Integrative Reviews integrate findings across health sciences, nursing, social work, multidisciplinary fields, and behavioural sciences to build comprehensive understandings (Vagharseyyedin, 2016; Christmalls & Gross, 2017; Snyder, 2019; Toronto, 2020; Dhollande et al., 2021). Each type guides research methodology, informing evidence-based practices, policy developments, and theoretical advancements.

Table 2. Sectors/Fields of Use for Different Types of Literature Reviews

Type of Literature Review	Sectors/Fields of Use
Narrative Review	- Humanities - Social Sciences - Emerging Research Fields - Education
Systematic Review	- Healthcare - Medicine - Social Sciences - Education - Policymaking
Meta-Analysis	- Medicine - Psychology - Education - Public Health - Clinical Research
Scoping Review	- Health Sciences - Social Sciences - Public Health - Environmental Studies - Emerging Research Areas
Critical Review	- Humanities - Social Sciences - Theoretical Research Areas - Cultural Studies
Integrative Review	- Health Sciences - Nursing - Social Work - Multidisciplinary Fields - Behavioural Sciences

Based on the ratings provided, the utilisation of different review types varies significantly. Integrative Reviews and Systematic Reviews emerge as the most frequently employed methodologies in academic research. These types are valued for their comprehensive synthesis of diverse literature and rigorous methods. In contrast, Scoping Reviews receive the lowest rating, indicating their relatively limited application in scholarly investigations. Critical Reviews, Narrative Reviews, and Meta-Analyses fall within intermediate usage levels, reflecting their varied but substantial contributions to research synthesis and analysis.

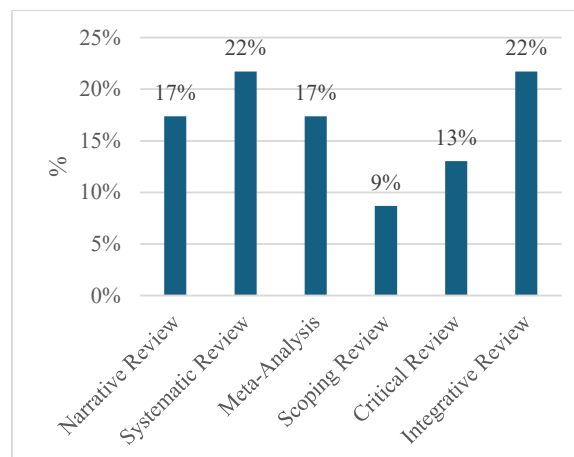


Figure 1. Familiarity with Different Types of Reviews

The synthesis of findings from various types of literature reviews reveals distinct methodological approaches and purposes in academic research. Narrative reviews, such as those described by Torracco (2016) and Snyder (2019), provide flexible frameworks for summarising and synthesising research across diverse disciplines, offering broad thematic insights without strict methodological constraints. In contrast, systematic reviews, as outlined by Johnson and Hennessy (2019), involve rigorous protocols for identifying, appraising, and synthesising evidence to address specific research questions. They are critical in healthcare and social sciences, where robust evidence is paramount for informing practice and policy (Post et al., 2020). Meta-analyses extend systematic reviews by quantitatively synthesising data from multiple studies, enhancing statistical power and precision (Pigott & Polanin, 2019). Each review type exhibits strengths and limitations that influence its applicability and impact within different disciplines. For instance, according to Arksey and O'Malley (2005), scoping reviews are instrumental in mapping the breadth of literature on broad topics and identifying key concepts and gaps in knowledge, particularly in emerging research areas. As discussed by Dodgson (2021), critical reviews provide critical evaluations and alternative perspectives in humanities and social sciences, challenging existing paradigms and advancing theoretical discourse. Integrative reviews, noted by Snyder (2019) and Christmals & Gross (2017), integrate findings across disciplines, facilitating comprehensive understandings in multidisciplinary fields like health sciences and behavioural sciences.

Methodologically, the systematic rigour of reviews like systematic reviews and meta-analyses ensures reliability and reproducibility, albeit at the cost of significant time and resource investment (Xiao & Watson, 2017; Hansen, Steinmetz & Block, 2022). In contrast, narrative and scoping reviews offer flexibility but may sacrifice methodological rigour and reproducibility, potentially limiting their reliability in specific contexts (Arksey & O'Malley, 2005; Torracco, 2016). The application of these review types varies across academic disciplines and professional sectors. Systematic reviews and meta-analyses are prevalent in disciplines requiring rigorous evidence synthesis, such as medicine, psychology, and education (Moosapour et al., 2021; Haidich, 2010). Narrative and critical reviews find utility in humanities and social sciences for developing theoretical frameworks and synthesising diverse perspectives (Fink, 2014; Laher, Fynn & Kramer, 2019). Scoping reviews are crucial in clarifying foundational concepts and identifying research gaps in health sciences and environmental studies (Munn et al., 2018). Looking forward, advancing literature review methodologies will likely involve addressing the methodological challenges and expanding the application domains of each review type. Future research should focus on enhancing the reproducibility of narrative and scoping reviews while integrating qualitative and quantitative approaches more effectively in integrative reviews.

III. Conclusion

Understanding the different types of literature reviews is essential for researchers to select the most appropriate approach for their studies. Each type serves distinct purposes and is suited to other research contexts, from providing broad overviews to conducting detailed quantitative syntheses. Researchers may contribute significantly to their subjects by carefully selecting the appropriate literature review and skillfully synthesising existing information.

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