RESEARCH ARTICLE

2025, vol. 12, issue 2, 357-367
https://doi.org/10.5281/zenodo.17870741

MAPPING THE USE OF SCOPING REVIEWS IN EDUCATIONAL RESEARCH: A SCOPING REVIEW

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Abstract

The value of Scoping reviews (SRs) as a research methodology has been commended in the research community. Research on the value of scoping reviews in education is still limited. This study intends to investigate its value in educational research. Adopting the scoping review method itself, the researchers examined the origins of scoping reviews, their development, and their application in various settings. The study focused on relevant research on the topic, conducted between 2005 and 2025. Drawing on the model developed by Arksey and O'Malley in scoping reviews, we found that the scoping review approach has become increasingly popular among educationists. The approach is regarded as highly beneficial, including the mapping of literature in a specific field and in areas where research is limited. The findings of this review confirmed that scoping reviews can enhance the quality of educational research; hence, they necessitate a deeper understanding. This understanding is crucial for implementing improved practices and making informed policy adjustments. Therefore, this research article calls for a deeper understanding of scoping reviews to utilise their benefits in educational research, including their contributions to policy and practice.

Keywords: Scoping Reviews; Educational Research; Research Gaps; Arksey and O'Malley Framework; Cognitive Mapping

1. Introduction

Research in a dynamic field such as education should be conducted comprehensively and with rigour. For this reason, Newman and Gough (2020) recognised the need to focus on limitations related to methodology in research practices. Peters et al. (2021) therefore supported different approaches to investigate and disseminate research findings, especially in a time when information is readily available. However, Cope (2014) alerted us to the importance of ensuring that scholarly rigour is applied when selecting methods during the research process. Scoping reviews may address this crucial quest for methodological rigour. According to Newman and Gough (2020), the scoping review approach is therefore deemed appropriate with its focus on transparency, scientific rigour and order. It is viewed as a strong research approach (Munn et al., 2018), enabling researchers to obtain an all-embracing overview of a topic, especially as it allows them to narrow down relevant ideas, themes and paucities in research (Rubel et al., 2025; Bukhave et al., 2024; Peters et al., 2021). Furthermore, as Chadee and Prinsloo (2024) pointed out, scoping reviews allow researchers to develop concentrated and impactful research efforts.

Although researchers suggest the advantages of scoping reviews, the application of this approach in education is not well understood. Peters et al. (2021), Tricco et al. (2016), and Bradbury-Jones et al. (2022) have shared that there have been many studies, yet they still see the need to research further the methods of the methodology and the process of undertaking a scoping review. Therefore, this study will seek to explore the advantages of using scoping reviews to support educational research, closing this gap in research, our study aimed to address the following questions:

- How are scoping reviews conceptually defined and distinguished within the research landscape?
- What is the scope and prevalence of scoping reviews in Educational research?

- How do scoping reviews contribute to educational research?

2. Literature Review

Despite its relatively widespread and everyday use (Mak & Thomas, 2022; Peters et al., 2021), there is no standard or agreed-upon definition of scoping reviews (Munn et al., 2022; Levac et al., 2010). This is likely due to the novelty of scoping reviews as a methodology (Hadie, 2024; Khalil et al., 2016). This, even though, for Khalil et al. (2025, p. 3), scoping reviews "fulfil a critical role in mapping and identifying the types of available evidence and identifying gaps within specific topics or fields … [which] offers a broad view of existing research and can contribute to identifying and setting research priorities". In Education, scoping reviews clarify definitions and conceptual boundaries within the field, enabling researchers to define and delineate the boundaries of their educational research. This enables scoping reviews to produce more effective evidence-based practices (Tricco et al., 2018; Peters et al., 2020). Pam et al. (2014, in Cacchione, 2016; Levac et al., 2010; Litherland et al., 2025) identified various synonyms used in the literature to describe 'scoping reviews.' These include mapping, rapid review, scoping project, report, or exercise, as well as literature or evidence mapping, evidence synthesis, and scoping studies. Despite its ambiguity, scholars using this methodology seem to promote the concept of scoping review as a term that should be commonly and widely used (Westphaln et al., 2021). Subsequently, in this study, we opt to apply the concept of a scoping review. For McLeod (2024), a scoping review resembles "a type of research synthesis that maps the existing literature on a broad topic to identify key concepts, research gaps, and types of evidence ."In addition, for the JBI, a scoping review puts forward "a map of what evidence has been produced from disparate or heterogeneous sources as opposed to seeking only the best evidence to answer a particular question related to policy or practice" (Joanna Briggs Institute, 2015).

All these definitions share one common idea: a scoping review is a method of mapping, blending, or synthesising various knowledge. Mapping, in this regard, refers to a procedure that provides a synopsis of the extent to which research was conducted in an area of enquiry across specific settings (Levac et al., 2010; Litherland et al., 2025). This idea enables researchers to determine the comprehensiveness of the literature available on a topic. As agreed by Munn et al. (2018), providing a comprehensive overview of the appropriate scholarly work and research available, including its emphasis. Moreover, a few scholars supported this by stating that an opportunity is created to "scan the landscape" (Litherland et al., 2025) and to "examine the extent to "examine the extent range and nature of research activity around a particular topic, to determine the value for undertaking a systematic review and disseminate research findings, and to discover research gaps in the literature" (Arksey & O'Malley, 2005; Levac et al., 2010).

Based on these wide-ranging definitions, the main aim of scoping reviews is to obtain an in-depth understanding of the existing studies conducted on the topic of interest. Peters et al. (2021) further argued that scoping reviews enable researchers to understand the nature of research and related evidence, the application of notions, ideas, and terms, and how findings were reported on a chosen topic over the years. As such, they do not comprise critical appraisals, and the results obtained from reviews are generally not applied in policy processes or in practice due to their descriptive nature, as opposed to their value in analysis and reporting (Lockwood et al., 2019). The JBI (2015, as cited in Cacchione, 2016) claimed that scoping reviews have a relatively broad scope that summarises existing literature and evidence.

Scoping reviews are commonly used in medical and health sciences research, where it is regarded as the second most prevalent type of knowledge synthesis (Gutierrez-Bucheli et al., 2022; Mak & Thomas, 2022). However, recent indications suggest that researchers in the social sciences, including those in Education (Pampaka et al., 2016; Gutierrez-Bucheli et al., 2022), are increasingly interested in scoping reviews as a research method. More so, it appears that the use of scoping reviews in South African Education has increased over the years, with more researchers across various fields of Education using this method. In one such study, Gibson et al. (2024) employed a scoping review to investigate the contributions of Early Childhood Development practitioners to key achievements in a child's physical development and activity participation. Scoping reviews have been conducted in Special Needs Education (cf. McKenzie et al., 2021), Data Science Education (cf. Msweli et al., 2023), Sexuality Education (Pillay, 2022), inequalities in secondary schools (cf. Muyambi & Ahiaku, 2025), learner academic success and support (Naidoo & Guse, 2024), teachers' job satisfaction (De Klerk et al., 2023) and the usability of eLearning amongst teachers and daycare workers (de Wit & Plastow, 2020). This research demonstrates both the value and importance of scoping reviews within a specific field of Education. This also indicates the broad extent to which scoping reviews have been used in South African Education research.

As previously stated, scoping reviews are structured approaches to mapping research. Tricco et al. (2018), Searl et al. (2024), and Rai and Beresford-Dey (2023) have suggested that scoping reviews can provide direction for subsequent studies by highlighting areas where evidence is lacking. Within the field of education, scoping

reviews have been conducted in several domains. Buchanan et al. (2021) studied the effects of artificial intelligence in nursing education and found limited evidence on how AI could be thoughtfully used in teaching. Another included Ghazili et al. (2024), who examined best practices and challenges associated with STEM education in early childhood settings. Jeong et al. (2025) investigated the effects of concept mapping on students' critical thinking skills, while Eikeland and Ohna (2022) considered evidence related to the application of differentiation in education. In scoping reviews, conceptual boundaries can be delineated in education, helping to avoid confusion in terminology (Peters et al., 2015).

Moreover, Tricco et al. (2018) suggested that scoping reviews can contribute to systematic reviews, aid in the investigation of literature, and assist with the management of information overload. Scoping reviews provide a streamlined framework and assess the extent and nature of findings (Fischer et al., 2016), which is helpful in situations in which access to trustworthy information is urgent (Paul et al, 2024). In curriculum studies, for example, scoping reviews can offer information related to pedagogic strategies in the design of curriculum, or facilitate the integration of policy and practice, or indeed, enable decision-making for the purposes of informing development of educational practice (Shatte et al., 2019; Bukhave et al., 2024; Fryer, 2024; Zafar et al., 2024).

Next, we will discuss the methodology used in this manuscript.

3. Method

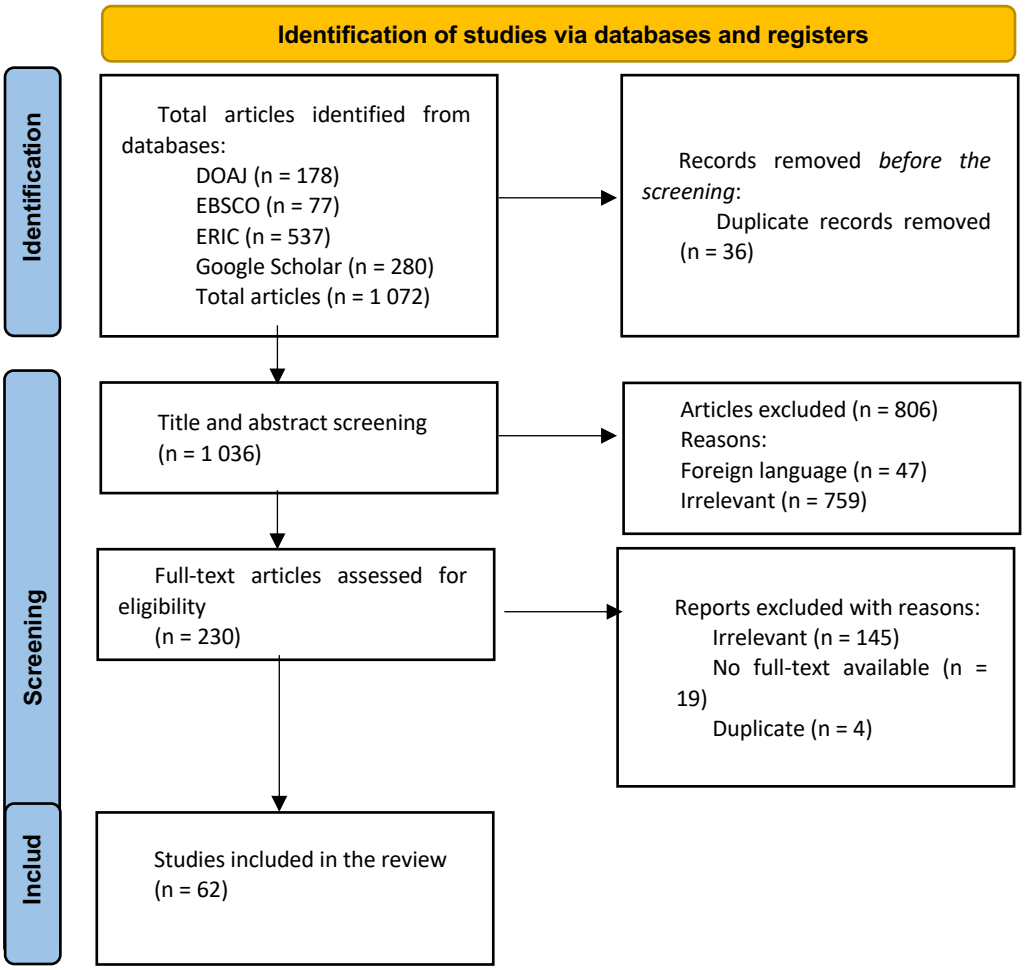
This research employed the Arksey and O'Malley framework (2005). The four proposed phases include Phase 1, which involves identifying the research questions (formulated above at 1), and Phase 2, which involves identifying relevant research studies. Several researchers (Chadeea & Prinsloo, 2024; Levac et al., 2010; Moya et al., 2023) have suggested the importance of precision and transparency in the process, principally in the selection of sources. Given this, four trustworthy databases were used to identify applicable educational research studies: the Directory of Open Access Journals (DOAJ), the Education Resources Information Centre (ERIC), EBSCO, and Google Scholar.

The key terms used in the search strings to reflect methodological focus were "scoping review," "scoping study," "mapping review," "education", and "educational research" for the disciplinary context. Using Boolean operators such as "AND" and "OR", these key terms were combined with additional terms: teaching, learning, curriculum, instruction, pedagogy, research gaps, knowledge gaps, mapping literature, identifying gaps, value, impact, contribution, and role. Lastly, the database filters were amended from "All fields" to "Abstracts," while the search strings were maintained. Initially, just over 450,000 articles were found across all four databases using an "All fields" search; therefore, a filter, as mentioned above, was adjusted to exclude irrelevant results. During stage three, inclusion and exclusion criteria were determined and designed for study selection. The table below is a summary of the study selection criteria:

Inclusion	Exclusion
Studies identified scoping reviews using formally recognised scoping review frameworks (e.g., Arksey & O'Malley, JBI, Levac, et al.)	Studies that do not use scoping reviews as a methodology
Studies focused on the educational research field and formal school-based Education (ensure consistency across studies and avoid ambiguity that may arise with mixed populations.	Studies focused on other disciplines and/or fields other than Education and did not focus on school-based Education.
Studies are used explicitly to map objectives and/or identify research gaps.	Studies that do not clearly state that the primary aim is to map the literature, identify research gaps, or explore existing literature (e.g., "Summarise the effectiveness..."
Studies published between 2005 and 2025 (the last 20 years)	Studies published before 2005
Studies published in English	Studies not published in English
Freely accessible articles	Restricted access (pay-to-view or subscription fee)

In stage four, the data were organised into a chart, and Figure 1 below indicates the studies related to this study (n = 62).

Figure 1: PRISMA flow diagram of studies screening and selection



Adapted from Page et al. (2021)

4. Findings

The literature identifies several primary functions of scoping reviews. One of their more prominent functions is the mapping of evidence and the categorisation of evidence in certain areas of research. Scoping reviews provide a comprehensive account of the current state of knowledge, an important output for spotting research priorities and illuminating definitions and conceptual boundaries. This is especially important in educational research, where failure to define terms can obscure understanding. Thus, in Education, this approach can also help researchers to transparently bound their research on educational practices, leading to the identification of more effective and relevant evidence-based practices. This conceptual and theoretical demarcation of a specific knowledge field is also crucial to a study's focus and management.

. Most evidence suggests that scoping reviews emerged in the early to mid-2000s. The Arksey and O'Malley framework, published in 2005, laid the groundwork for directing scoping reviews. The data showed that the Arksey and O'Malley outline provided a comprehensive methodological approach to scoping reviews, with the goal of thoroughly mapping out relevant studies (Arksey & O'Malley, 2005). Some noted criticisms of the framework called on researchers to improve the scoping review methodology, particularly regarding standardisation, trustworthiness, comparability of findings, data synthesis, and the establishment of clear inclusion and exclusion criteria. In response to these challenges, the Joanna Briggs Institute formally promoted a more systematic and even transparent approach to scoping reviews. In this regard, the data demonstrated that this framework is especially beneficial in contexts where rapid access to reliable data is essential. Another strength of this approach is that it helped to assess reporting quality, highlight inconsistencies, and ensure methodological rigour.

5. Discussion of the Findings

A scoping review is quite a recent addition to the collection of research methods that rely on the synthesis of evidence. However, the use of it as an "evidence synthesis methodology" (Munn, 2022, p. 952) in research,

particularly in education research, has significantly increased over the years (Cacchione, 2016; Gutierrez-Bucheli et al., 2022). Its popularity as a systematic research practice could be attributed to its potential to not only provide a 'map' of available literature on a particular educational topic but also to its ability to assist with research questions, critiques of literature, and the emphasis it places on education research efforts across time (Litherland, 2025). More so, its popularity could also be ascribed to its ability to help understand the nature of providing insights into the characteristics of a collection of facts, information, and data, the ways terminology, ideas, and notions are used, and the way a topic has been described and covered in the literature (Peters et al., 2021), and to its somewhat iterative and flexible nature (Peters et al., 2021). This flexibility allows for deviations from the protocol, changes to the questions, corrections to the criteria used to include or exclude data sets and information, and review at any stage of the process.

Even with the advances of scoping reviews more broadly over the years and the introduction of stricter scoping review guidelines, the protocol for scoping reviews that is most commonly used is that of Arksey and O'Malley (2005) (Cacchione, 2016). Although Arksey and O'Malley's framework is strongly recommended, the fact that there are ongoing developments and introductions of guidelines is indicative of a collective stated goal among the research community to establish scoping reviews as a viable and trustworthy approach to knowledge synthesis. It has evolved from Arksey and O'Malley's original framework from 2005, to the proposed modifications, additions, and enhancements by Levac et al. (2010) to the updated JBI in 2014, it through thoughtful and intentional voices signify a collective response of fellow scholars and the research community, to try to enhance it, try to make it more rigorous, and to try to establish its place among synthesis methodologies. Furthermore, this willingness signifies scoping reviews are leading to developments and as an established and reputable methodology in Education and the research community.

Continuous attempts to refine and improve the scoping review methodology enhance its trustworthiness as an educational research method and its comparability with other established research methods.

In addition, conceptions of scoping reviews as mapping or plotting methodologies are fundamental to our understanding of their novel contribution to education research. These understandings are informed by perceptions of scoping reviews, which aim to methodically and thoroughly classify and plot the nature, extent, and comprehensiveness of available data and information on an educational theme or subject. The use of scoping reviews in Education thus makes possible the clarification of definitions, the drawing of conceptual boundaries, and the provision of an all-inclusive scope of research done in Education. The absence of a commonly accepted definition or clearly delineated scoping review method is, of course, a testament to the novelty of this methodology. However, whilst this could be regarded as a limitation, clarity about the mapping focus of scoping review provides sufficient justification for its use in education research and for taking those preliminary steps toward conducting a systematic in-depth review (Mak & Thomas, 2022) to better understand how research on a particular educational topic was conducted, and to inform policy and practice.

A scoping review is a methodology whose popularity in educational research, particularly in South Africa, demonstrates increased validation and an appreciation of its value and worth for educational research in the country. This is aptly demonstrated by the widespread use and pertinency of scoping reviews in research across various disciplines of Education, such as Early Childhood Development (ECD), Data Science Education, Sexuality Education, social justice, and learner support. The enthusiasm around scoping reviews also reflects a purposeful attempt to entertain evolving, well-structured, evidence-based research approaches that may improve research practice (Peters et al., 2021; Guitterez et al., 2021). To conclude, the identification of gaps in existing research is crucial for the development of educational research. These gaps include a focus on emerging areas of research, such as advancements and challenges in education, among others. This contributes to capacity building by chairing educators engaging in responsive strategies established by schools.

6. Limitations, Strengths, and Implications of the Study

This review confirmed that research on scoping reviews in the educational field remains limited. It also highlighted the challenge of formulating clear inclusion and exclusion criteria in scoping reviews. This consideration may limit the depth and clarity of the review outcomes. Additionally, the challenges associated with the availability of a standardised methodology in this approach may limit the trustworthiness of the data. Additionally, the limitations of this small review (n = 62) include potential publication bias, language limitations, and reliance on a few academic databases. Despite these limitations, the scoping review demonstrated that scoping reviews can make significant contributions to the research field. Apart from their flexibility, the main strength of the scoping review is that it supports researchers in conceptualising and identifying gaps for further research. Also, the quality of the literature and reporting strategies can be evaluated by researchers, which may enhance methodological rigour and transparency. Furthermore, the findings demonstrated that scoping reviews

are useful for delineating conceptual and theoretical boundaries. Lastly, this investigation strongly supports the progress of curriculum and policy due to the rapid availability of data.

7. Conclusions

In this scoping review, important themes related to the value of using scoping reviews as a research methodology emerged. One point that warrants attention is the relative strength of scoping reviews in identifying research gaps. Additionally, this study presented findings that outlined how scoping reviews support collaboration amongst educational researchers, educators and policymakers, which may produce a level of enriched and synergised research engagement. Although scoping reviews provide various benefits, it is recommended that further research address a few questions so as to enhance our understanding of scoping review methodology. For example, scoping reviews identified the need for standardised reporting and highlighted the importance of implementing it. In addition, the studies reviewed indicated a need to investigate interdisciplinary educational context and methods, which may culminate in a more rounded view of the educational landscape and better inform future educational research agendas more adequately. This scoping review also holds worth for the South African higher education context, which presents and relatively cutting-edge educational research agenda.

Acknowledgement of AI Technologies use:

Certain AI technologies were utilised during the writing of the manuscript. We used Co-Pilot to brainstorm the title and research questions. We also used it in conjunction with Grammarly to receive feedback on the manuscript's structure, coherence, flow and grammar. All AI-generated suggestions were critically evaluated and validated by the authors to ensure academic rigour and integrity. The authors also addressed potential biases inherent in AI-generated content. The final version of the paper reflects the sole intellectual responsibility and scholarly judgement of the authors.

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