

Mapping Research Trends On Education Management In Elementary Schools: A Bibliometric Analysis Using Scopus Database

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Abstrak

Studi ini meneliti perkembangan penelitian manajemen pendidikan sekolah dasar dari tahun 2003 hingga 2025 menggunakan metode bibliometrik. Sebanyak 934 dokumen yang terindeks Scopus dianalisis dengan Bibliometrix dan RStudio untuk mengidentifikasi tren publikasi, perkembangan tematik, dan pola kolaborasi global. Hasilnya menunjukkan pertumbuhan pesat di bidang ini, dengan tingkat pertumbuhan tahunan sebesar 14,56%, bersamaan dengan peningkatan keragaman topik, termasuk kepemimpinan sekolah, pengembangan guru, keterlibatan orang tua, peningkatan sekolah, dan pendidikan dasar. Analisis tematik menunjukkan pergeseran dari perhatian tradisional seperti administrasi dan kepemimpinan sekolah menuju isu-isu yang lebih baru, termasuk pendidikan inklusif, kesejahteraan siswa, dan prestasi akademik. Kepemimpinan tetap menjadi tema sentral, tetapi sekarang lebih terkait dengan isu-isu pendidikan yang lebih luas. Tema-tema inti seperti pendidikan dasar dan pembelajaran siswa terus membentuk bidang ini, sementara kesehatan mental dan psikologi muncul sebagai topik interdisipliner baru. Studi ini juga menyoroti produktivitas penelitian global yang tidak merata. Amerika Serikat, Inggris Raya, Australia, Afrika Selatan, dan Turki mendominasi hasil publikasi, sementara kolaborasi internasional tetap terkonsentrasi di jaringan berbahasa Inggris. Secara keseluruhan, studi ini memberikan gambaran ringkas tentang pertumbuhan intelektual bidang ini, tren tematik utama, dan dinamika penelitian global, menawarkan wawasan yang berguna bagi para peneliti, pendidik, dan pembuat kebijakan.

Kata Kunci: *Manajemen Pendidikan, Pendidikan Dasar, Sekolah Dasar, Kepemimpinan Sekolah, Bibliometrik*

Abstract

This study examines the development of elementary school education management research from 2003 to 2025 using bibliometric methods. A total of 934 Scopus-indexed documents were analyzed with Bibliometrix and RStudio to identify publication trends, thematic developments, and global collaboration patterns. The results show rapid growth in this field, with an annual growth rate of 14.56%, alongside increasing topic diversity, including school leadership, teacher development, parental involvement, school improvement, and primary education. Thematic analysis indicates a shift from traditional concerns such as school administration and leadership toward newer issues, including inclusive education, student wellbeing, and academic achievement. Leadership remains a central theme, but it is now more interconnected with broader educational issues. Core themes such as primary education and student learning continue to shape the field, while mental health and psychology are emerging as new interdisciplinary topics. The study also highlights unequal global research productivity. The United States, United Kingdom, Australia, South Africa, and Turkey dominate publication output, while international

collaboration remains concentrated in anglophone networks. Overall, this study provides a concise overview of the field's intellectual growth, main thematic trends, and global research dynamics, offering useful insights for researchers, educators, and policymakers.

Kata Kunci: *Education Management, Elementary, Primary, Leadership School, Bibliometric*

INTRODUCTION

Over the past two decades, school leadership and management has been recognized as the second most important factor in schools influencing student learning, after the quality of classroom instruction (Bellibaş et al., 2021; Leithwood et al., 2004; Sebastian & Allensworth, 2012). Effective educational management in schools shapes the quality of the organization, professional culture, and instructional routines in schools, thereby indirectly influencing student outcomes in literacy, numeracy, and broader competencies (Day et al., 2016).

In many countries, reforms have progressively shifted authority from central bureaucracies to schools through school-based management (SBM) or similar autonomy initiatives (Abulencia, 2012). These reforms seek to make schools more responsive to local needs and increase accountability by giving greater voice to principals, teachers, and communities in decisions about curriculum, staffing, budgeting, and assessment (Alajmi, 2022; Constantinides, 2022; Darling-Hammond, 2004). Experimental and quasi-experimental evidence shows that well-designed SBM programs can improve elementary school learning outcomes, especially when combined with targeted resources and strong local leadership (Alrasheedi & Almutawa, 2022; Bandur et al., 2022; Cheng, 2022; Ochmann et al., 2022).

At the same time, a broad tradition of research on instructional leadership has documented how principals set academic goals, oversee teaching, coordinate curriculum, and use data related to student achievement, including at the elementary level (Hallinger, 2011). More recent work has expanded the focus to distributed leadership, professional learning communities, and sustained leadership, emphasizing shared responsibility, collaboration, and long-term school capacity (DeMatthews, 2014). Within this broader field of educational leadership and management, elementary or primary schools represent a particularly critical

context. Studies show that variations in elementary school quality are strongly related to differences in school management, principal leadership, and teacher support system (DeMatthews et al., 2022; Printy & Liu, 2021).

Despite this growth in empirical and conceptual work, a systematic bibliometric mapping of research on educational management in elementary schools over the past 20 years is still lacking. Existing reviews tend to focus on educational leadership in general and studies of principals' instructional leadership at all school levels (Matebe, 2014). Furthermore, previous studies have focused on specific reform strategies such as SBM, without isolating the distinct thematic and methodological patterns that characterize the elementary school management literature (DeMatthews et al., 2022; Haryati et al., 2021; Ochmann et al., 2022). Based on this, there has been no bibliometric mapping of educational management at the elementary school level. Thus, there is a gap in comprehensive studies that specifically examine the landscape of educational management research in elementary schools over the past two decades.

Therefore, this study conducted a bibliometric analysis to visualize and map the research profile and emerging trends and themes in educational management in elementary schools. This study aims to provide valuable insights for researchers, educational institutions, teachers, and policymakers regarding the direction of research developments in this field. The resulting information can be used to develop new research agendas, strengthen evidence-based managerial practices, and identify areas that still require further exploration. Furthermore, the findings of this study can assist policymakers in formulating strategic decisions to support the improvement of the quality of elementary school management, as bibliometric mapping provides a comprehensive overview of developments, conceptual trends, and scientific contributions that have been made over the past 20 years, guided by the following research questions:

1. What are the main characteristics and development patterns of the literature on educational management in elementary schools over the past 20 years?
2. Who are the main authors and source titles contributing to this literature?
3. Which articles are most cited?

4. Which countries and regions are most active in publishing on elementary school management, and how do they collaborate?
5. What are the dominant and emerging themes, based on keyword trends and conceptual clusters?
6. What are the knowledge structures that organize this research domain?

RESEARCH METHODS

Metode This study uses a bibliometric approach to identify and map research trends in the field of educational management in elementary schools, adopted in the style of Hallinger & Kovačević (2019). As understood in research trend studies, trends indicate the collective behavior of a group of researchers who begin to pay special attention to a particular scientific topic (Chen et al., 2023). This trend is generally seen as a condition when the interests and needs of the scientific community align with contemporary scientific findings. Meanwhile, bibliometric mapping can reveal intellectual connections within a dynamic scientific knowledge system, thus helping researchers determine the direction of future research development. Bibliometric studies require a bibliographic database that provides scientific publication information such as titles, authors, abstracts, keywords, and references. In this study, Scopus was used as a data source because it is one of the largest and most curated databases, with extensive coverage of journals, proceedings, and academic books across disciplines, including the field of educational management. Furthermore, Scopus provides a data format that supports various analysis needs.

The bibliographic data extraction process from Scopus was conducted between 2003 and 2023. The initial search found 1,582 documents related to educational management in elementary schools. However, after filtering, as shown in Figure 1, 934 documents were found. The keywords and limitations used were: TITLE-ABS-KEY (("education management" OR "educational management" OR "school management" OR "educational leadership" OR "school leadership" OR "school administration") AND ("elementary school" OR "primary school" OR "primary education" OR "elementary education" OR "basic education")) AND PUBYEAR > 2003 AND PUBYEAR < 2023 AND (LIMIT-TO (DOCTYPE , "re"

) OR LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "ch")) AND (LIMIT-TO (LANGUAGE , "English")).

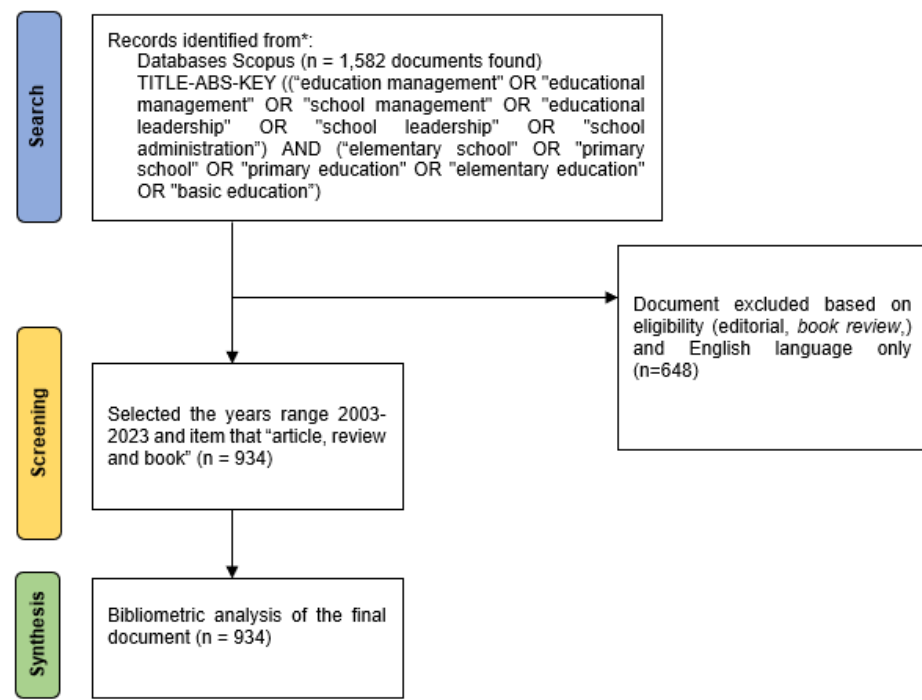


Figure 1. Article selection process and methods

Adapting procedures from previous research, the selection process began with a filtering process based on the publication year range, namely 2003–2023, and limited the document type to journal articles as the most representative form of scientific publication containing original research findings (Echchakoui, 2020). Furthermore, only articles in English were included. Subsequently, a series of publications were re-screened to ensure relevance to the topic of educational management at the elementary school level, resulting in a final number of articles ready for analysis in this study. The entire selection process is displayed through a flowchart of article selection depicting the stages of search, screening, and inclusion in Figure 1.

The selected documents were exported in CSV format containing affiliations, author names, titles, countries, journal names, and keywords. The data were then analyzed descriptively according to the research questions. Bibliometrix and R-studio software were used to visualize the data. This software provides a

comprehensive set of analysis functions for processing various bibliometric indicators, such as the number of publications, the number of citations, author collaboration networks, and keyword co-occurrence (Aria & Cuccurullo, 2017). Furthermore, Bibliometrix and Rstudio allows the application of standardized bibliometric measures, ensuring that the analysis results can be compared with other literature in the field of educational management.

A quantitative descriptive analysis was conducted to determine key information, publication sources, most productive countries, and institutional affiliations in elementary school education management research. This study also analyzed citation patterns through co-authorship analysis to see how relationships between authors are established in the literature. Furthermore, co-occurrence mapping was used to illustrate the development path of research themes, keyword trends, and thematic structure. Through this mapping technique, the frequency of keyword occurrences was analyzed to identify the most researched themes and reflect their centrality in the knowledge map (Sinkovics, 2016). The stronger the relationship between two keywords, the more frequently they appear together in a publication.

RESULT

1. Main information

These bibliometric results indicate that research on educational management in elementary schools experienced rapid growth throughout 2003–2023. Over the two decades, 934 documents were collected, published in 418 sources (journals, books, and others), with a high annual growth rate of 14.56%, indicating increasing academic attention to this topic. The average document age is 8.32 years, with 16.13 citations per document, indicating a fairly strong level of scholarly influence. In terms of substance, there are 2,343 author keywords and 899 Keywords Plus, reflecting the diversity of research themes. In terms of authors, there are 2,070 authors, including 235 sole authors, with an average of 2.49 collaborators per document, and 12.74% of publications involve international collaboration an indication of increasing global networking in educational management studies. The majority of documents are journal articles (828), followed by book chapters (73) and review articles (33), indicating that the main contributions to this field come from empirical and conceptual publications published in reputable journals.

Table 1. Bibliometric main information

Description	Results
Main Information About Data	
Timespan	2003:2023
Sources (Journals, Books, etc)	418
Documents	934
Annual Growth Rate %	14.56
Document Average Age	8.32
Average citations per doc	16.13
References	7539
Document Contents	
Keywords Plus (ID)	899
Author's Keywords (DE)	2343

Authors	
Authors	2070
Authors of single-authored docs	235
Authors Collaboration	
Single-authored docs	258
Co-Authors per Doc	2.49
International co-authorships %	12.74
Document Types	
article	828
book chapter	73
review	33

2. Annual Scientific production

Figure 2, which displays the Annual Scientific Production Graph, shows that scientific publications on educational management in elementary schools experienced consistent and significant growth throughout 2003–2022. At the beginning of the period, the number of articles was still very low, but began to increase steadily after 2008 and showed a sharp acceleration around 2012–2014, marking a surge in academic attention to the issues of school leadership, school-based management, and improving the quality of elementary education. Despite some fluctuations in 2016–2017, the overall trend remained upward, reaching its highest peak in 2021 before declining slightly in 2022. This pattern confirms that the last two decades have been a phase of strong research expansion, both in terms of volume and thematic diversity, in line with the growing global need to improve the quality of elementary education through more effective managerial and leadership approaches.

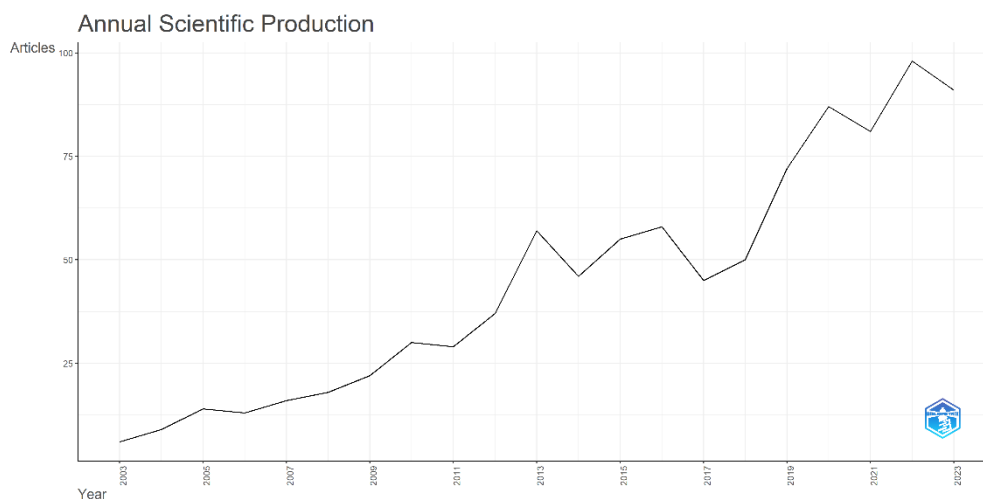


Figure 2. Annual Scientific Production

3. Researchers' profile and source titles

The Sankey visualization in Figure 3 shows the close relationship between key references (CR), authors (AU), and primary keywords (KW_Merged) in elementary school educational management research. It can be seen that classic works such as *Hallinger & Murphy* (1985), *Bandura* (1986), *Bossert et al.* (1982), and *Spillane* (2003) serve as intellectual foundations widely cited by influential authors such as Hallinger, Leithwood, Altinay, Pashiardis, and Spillane himself. This interconnectedness then flows into dominant keywords such as leadership, school leadership, primary schools, school management, school improvement, and teachers. This indicates that research in the last two decades has focused on theories of educational leadership, school management, and the role of teachers as key actors in improving the quality of elementary schools. This network structure illustrates how the seminal works of these great figures form a theoretical basis that is then translated by contemporary researchers into core themes such as instructional leadership, school improvement, and elementary education management.

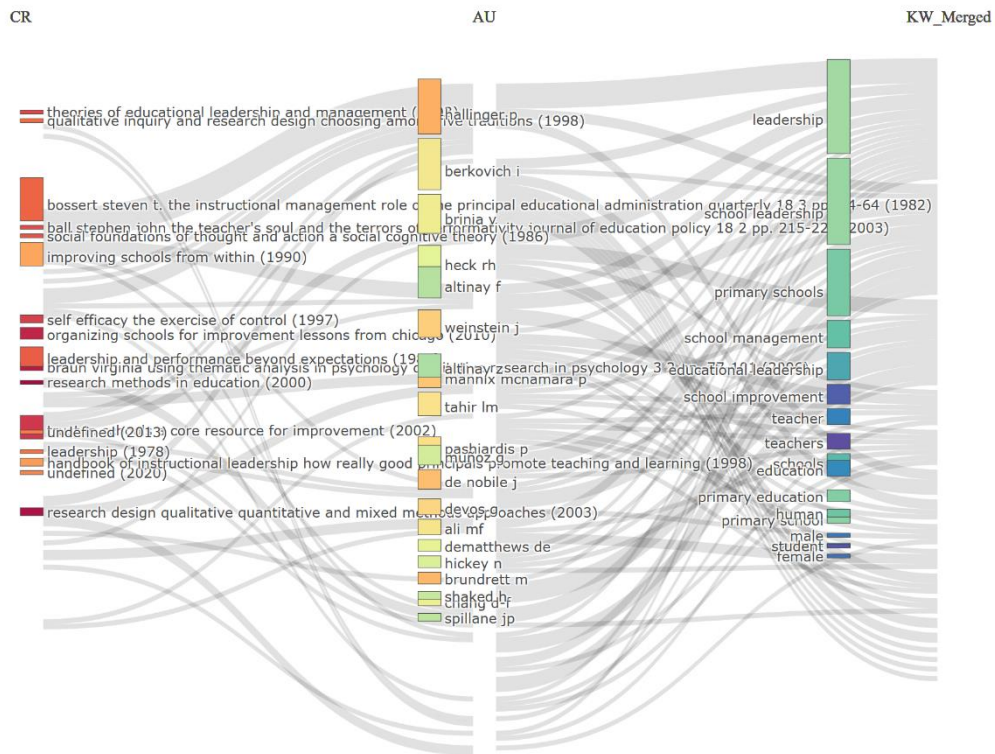


Figure 3. Thematic development of scientific creativity research using Sankey Diagram.

Table 2 shows that Coburn’s (2005) works were the most influential, receiving 471 and 446 citations, respectively, with an average of over 22 citations per year, confirming their role as key references in the study of school management and organization. Hallinger & Heck (2010) publications were also highly influential with 410 citations (25.63 per year), while Thoonen et al. (2011) recorded the highest annual citation performance (26.60) and the highest Normalized TC (14.54), demonstrating the strength of their contribution to the study of teacher motivation and school capacity. Other articles such as McEwan (2015), Leithwood et al. (2020), and Heck & Hallinger (2014) also had significant impacts with annual TCs above 15, reflecting the growing attention to school leadership and organizational effectiveness. Meanwhile, studies by Keshavarz et al. (2010), Camburn et al. (2003), and Ross & Gray (2006) remain important references with consistent citations, strengthening the theoretical foundations of educational management

studies. Overall, these citation patterns indicate that a small number of authors have produced works with substantial influence that have shaped the direction of educational management research over the past two decades.

Table 2. Top author and citation

Author and Years	DOI	Total Citations	TC per Year	Normalized TC
(Coburn, 2005)	https://doi.org/10.1177/0895904805276143	471	2.43	9.07
(Coburn, 2005)	https://doi.org/10.1080/09243450600565829	446	2.30	7.61
(Hallinger & Heck, 2010)	https://doi.org/10.1080/13632431003663214	410	5.63	8.02
THOONEN EEJ, 2011, EDUC ADM Q	https://doi.org/10.1177/0013161X11400185	399	6.60	14.54
(McEwan, 2015)	https://doi.org/10.3102/0034654314553127	252	2.91	14.44
(Keshavarz et al., 2010)	https://doi.org/10.1016/j.socscimed.2010.01.034	251	5.69	4.91
(Camburn et al., 2003)	https://doi.org/10.3102/01623737025004347	217	.43	3.81
(Leithwood et al., 2020)	https://doi.org/10.1177/0013161X19878772	208	4.67	15.07
(H. Heck & Hallinger, 2014)	https://doi.org/10.1108/JEA-08-2013-0097	185	5.42	10.48
(Ross & Gray, 2006)	https://doi.org/10.2307/20054196	166	.30	2.83

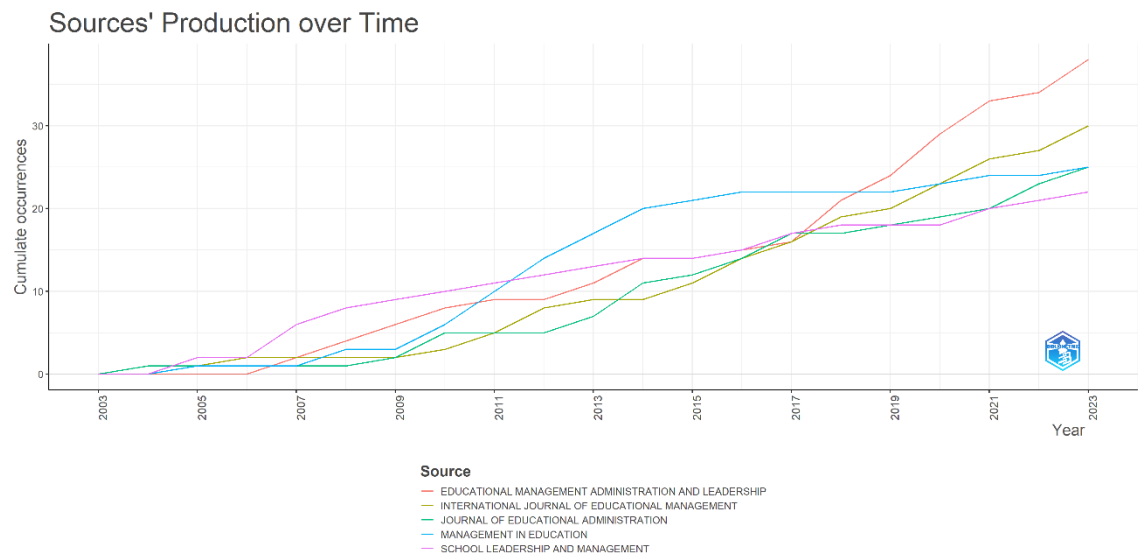


Figure 4. Top Source and Source production over time

Figure 4. Top Source and Source Production over Time shows the cumulative growth pattern of publications from the top five most productive journals in the field of educational management in elementary schools over the past two decades. Educational Management Administration and Leadership has seen the sharpest increase since 2017, making it the most dominant source in recent years. The International Journal of Educational Management and the Journal of Educational Administration have shown steady and consistent growth since 2010, reflecting their important roles as primary publication platforms for school leadership and management research. Meanwhile, Management in Education and School Leadership and Management also show upward trends, albeit more moderately, with significant contributions particularly in the 2015–2020 period. Overall, this graph indicates that research interest in educational management, particularly at the elementary school level, is strengthening in reputable educational management journals, reflecting the expansion and diversification of research themes over the past two decades.

4. Country and collaboration

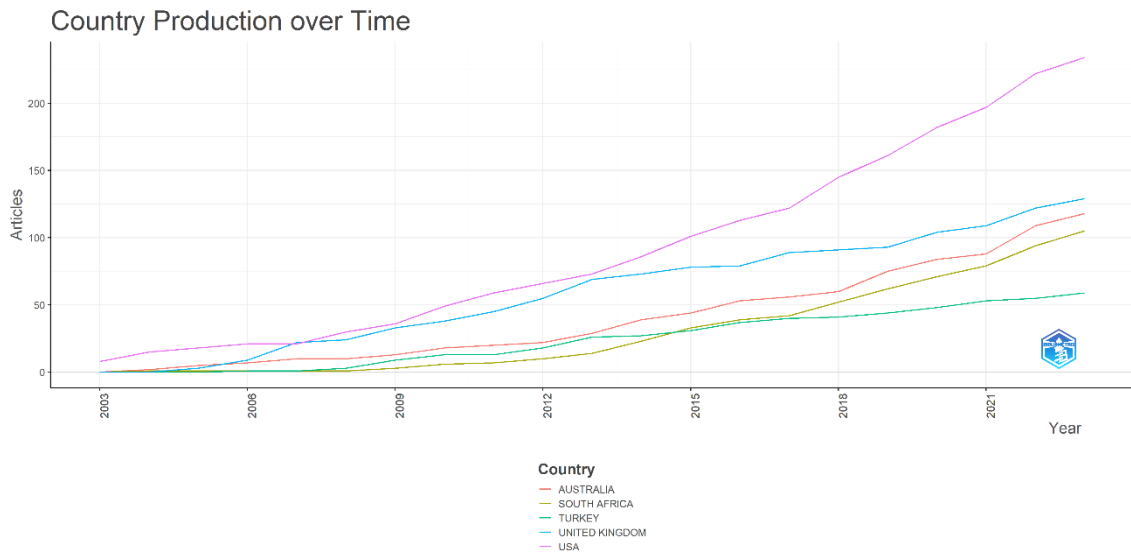


Figure 5. Country Production

The Country Production over Time chart in Figure 5 shows the trend in contributions by major countries to publications related to educational management in primary schools from 2003 to 2022. The United States (USA) has consistently been the most productive country, with a particularly sharp increase after 2012, reaching over 220 publications by the end of the period, confirming its position as a center for educational leadership and management research. The United Kingdom follows as the second largest contributor, with steady and strong growth, reflecting a well-established research tradition in school leadership studies. Australia, South Africa, and Turkey show a more gradual but still significant growth pattern, particularly after 2015, signaling the expansion of global research and the increasing involvement of countries in the global south in educational management discourse. Overall, the chart demonstrates that research in this area is international in nature, with a strong focus of knowledge production in English-speaking countries, but with increasing contributions from other regions.

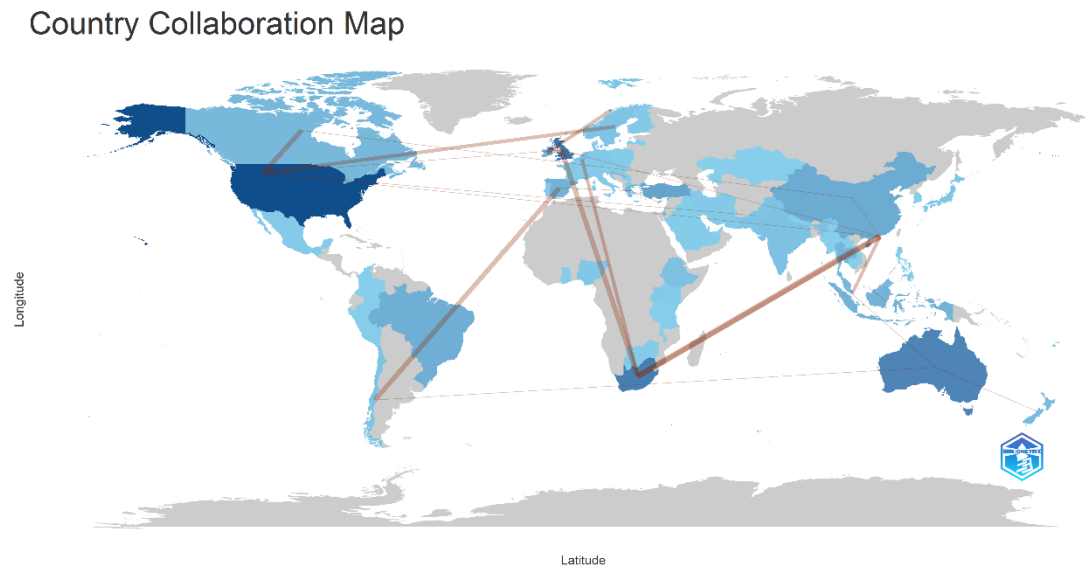


Figure 6. Country collaboration Map

Figure 6. This Country Collaboration Map shows patterns of international collaboration in primary school education management research. Dark blue indicates countries with high research productivity, such as the United States, the United Kingdom, Australia, and South Africa, which also appear to be centers of global collaborative networks. Connecting lines indicate the flow of research collaboration between countries, showing that the United States and the United Kingdom have strong collaborative relationships with various regions, including Europe, Asia, Africa, and Oceania. Cross-continental collaborations, for example, between the United Kingdom and South Africa, Australia and several Asian countries, and the United States and Europe, illustrate the global nature of this research and demonstrate that issues of primary education leadership and management are studied through a multi-contextual perspective. This map shows that countries with significant research capacity tend to be key hubs in international collaboration networks, while developing countries are beginning to establish a more active role in contributing to and exchanging knowledge globally.

5. Word frequency and Trend Topic

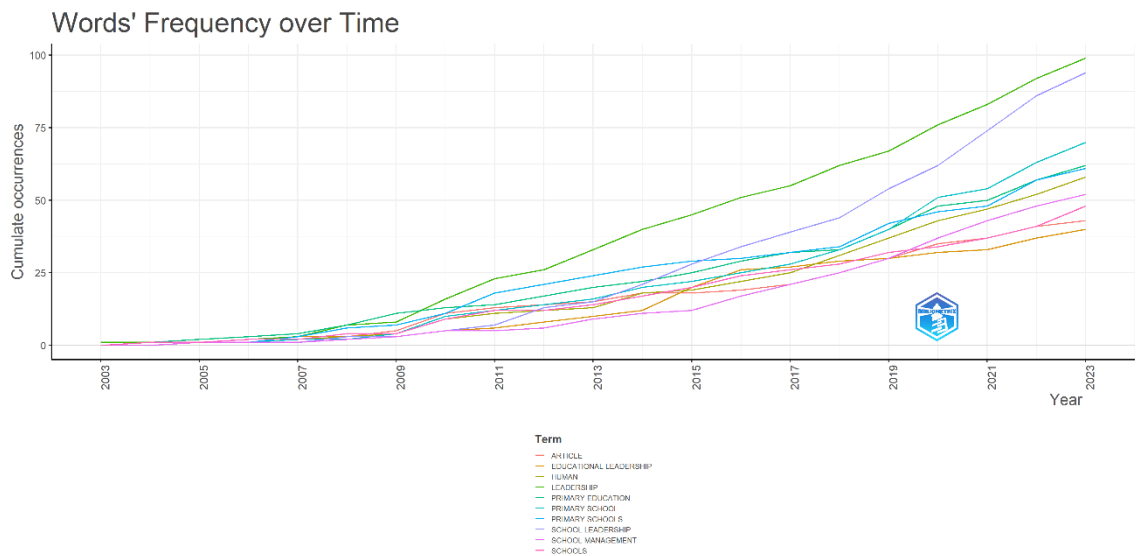


Figure 7. Word Frequency over time

The Words’ Frequency over Time graph in Figure 7 depicts the cumulative development of the most frequently used keywords in educational management research in elementary schools from 2003 to 2023. Terms such as leadership, school leadership, and school management dominate the frequency of occurrence, indicating that the primary focus of research over the past two decades has remained on aspects of school leadership and management. Keywords related to the context of elementary education, such as primary schools, primary education, and schools, also show steady growth, reflecting the growing academic focus on improving the quality of learning at the elementary school level. Interestingly, the terms educational leadership and learning experienced more moderate but consistent growth, indicating a broadening of research approaches from structural management to instructional leadership and student learning outcomes. Overall, this graph confirms that school leadership remains the center of gravity of research, while the focus on elementary education continues to strengthen in line with the global agenda of improving the quality and equity of education.

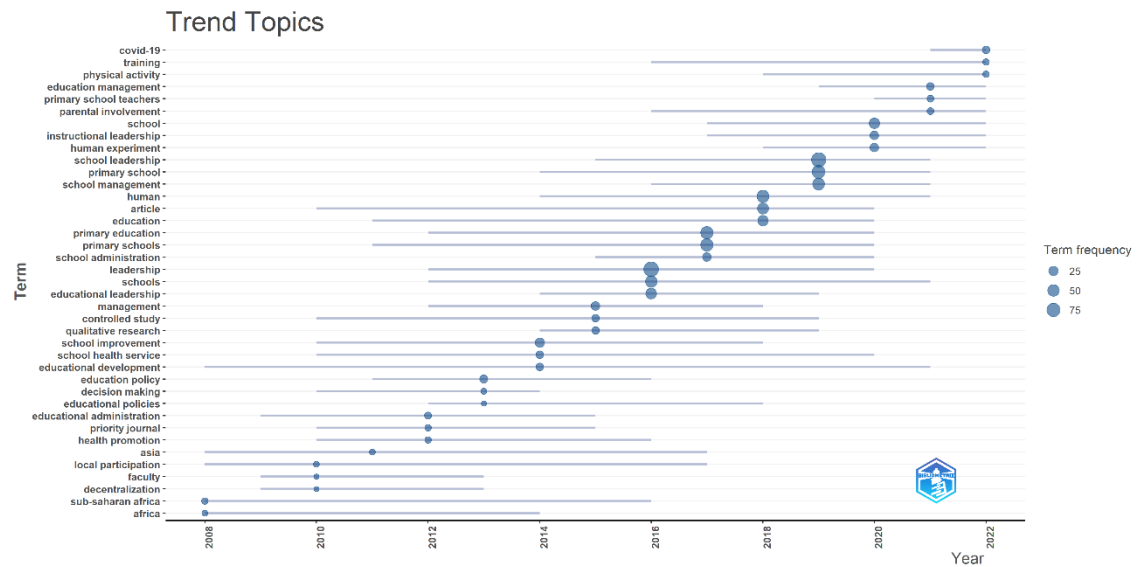


Figure 8. Trend Topic

Figure 8 Trend Topics shows how the research focus in the field of educational management in primary schools developed and shifted throughout 2008–2022. In the initial period, topics such as decentralization, local participation, educational administration, and geographic contexts such as sub-Saharan Africa and Asia dominated, reflecting the initial focus on structural reform and local contexts in school management. Entering 2012–2016, the research focus began to shift to core themes such as leadership, school leadership, school improvement, decision-making, and educational leadership, indicating a strengthening of studies on the role of leadership in improving the quality of primary schools. The period 2017–2020 saw the emergence of terms more oriented towards practice and learning quality, such as primary education, primary school, teachers, human capital, instructional leadership, and parental involvement, confirming that research increasingly emphasizes the role of teachers, communities, and instructional leadership. In more recent years (2020–2022), new themes emerged such as COVID-19, training, and physical activity, reflecting responses to global dynamics and the adaptation of primary school management during the pandemic. Overall, this graph shows the evolution of research from structural issues and local contexts to a stronger focus on leadership, learning, and school adaptation in the face of new

challenges.

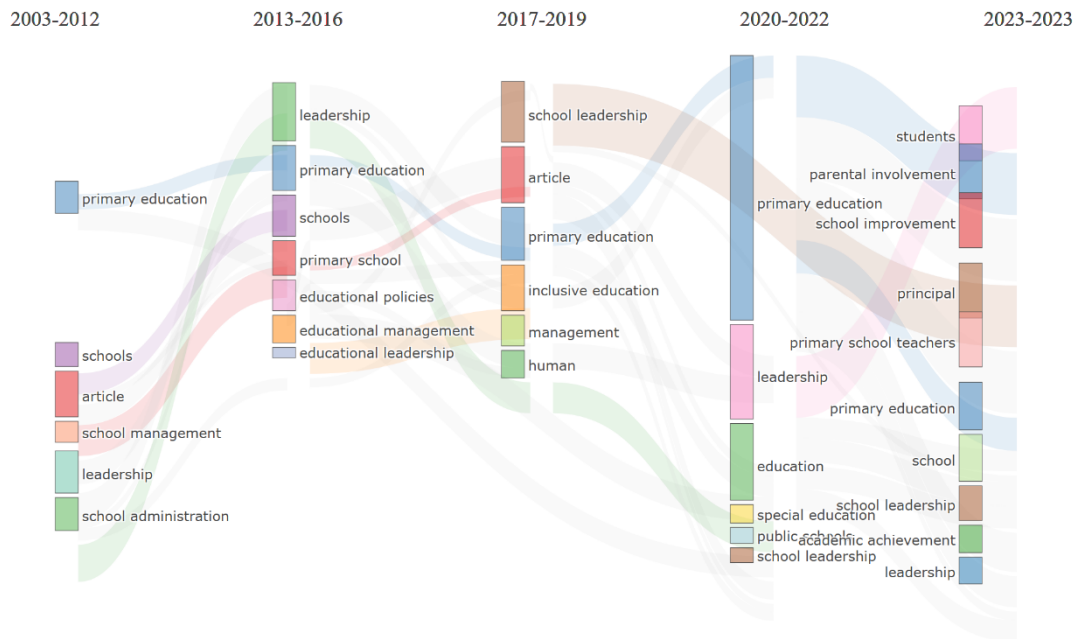


Figure 9. Thematic evolution

Figure 9 shows the thematic evolution of research themes in educational management in elementary schools from 2003 to 2023. In the initial period of 2003–2012, the research focus was simple and centered on core themes such as primary education, schools, school management, and school administration, reflecting the early stages of the field's formation. Entering 2013–2016, themes diversified: educational leadership, educational policies, and educational management emerged, signaling a shift from structural issues to educational leadership and policies as drivers of elementary school performance. In 2017–2019, research themes increasingly focused on practical issues such as school leadership, inclusive education, management, and an orientation toward human capital, reflecting a greater focus on instructional leadership and inclusivity. In the 2020–2022 phase, the research landscape expanded rapidly with the emergence of topics such as school improvement, special education, public academic achievement, and the continued strength of leadership and primary education, illustrating the dynamics of schools' responses to the pandemic and the demands for improved learning

quality. Finally, in 2023, the research focus became increasingly oriented toward actors and processes, such as students, parental involvement, principals, and primary school teachers, while school leadership remained a key theme. This pattern demonstrates that over the past two decades, research has shifted from macro-structural themes to more micro-themes, focusing on leadership practices, teacher roles, parental involvement, and student academic performance.

6. Knowledge Structures

Figure 10. The Co-occurrence Network shows how keywords in elementary school educational management research form three main, interconnected clusters. The red cluster centers on the concepts of leadership and school leadership, indicating that instructional, distributive, and managerial leadership are the dominant focus of academic discourse. Surrounding this cluster are terms such as school improvement, professional development, principals, teachers, and inclusive education, indicating that research focuses heavily on how leadership influences the quality of learning, teacher development, and inclusive practices. The green cluster focuses on educational policy and management themes, such as educational management, educational development, curriculum, management, and education policy. This cluster illustrates the structural and policy frameworks that underpin elementary school management practices. Meanwhile, the blue cluster is dominated by terms such as primary school, students, child, learning, and humans, confirming the research's orientation toward the impact of management on student learning experiences and outcomes. The interconnections between clusters indicate that school leadership (red cluster) serves as a crucial bridge between structural policy/management (green cluster) and elementary education outcomes (blue cluster). Thus, this network illustrates that the entire educational management ecosystem in elementary schools revolves around the interaction between leadership, policy, and improving student learning.

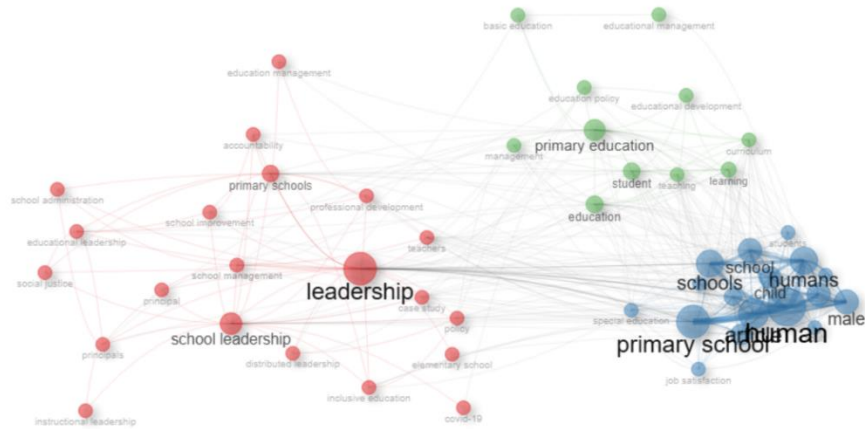


Figure 10. Co-Occurrence Network

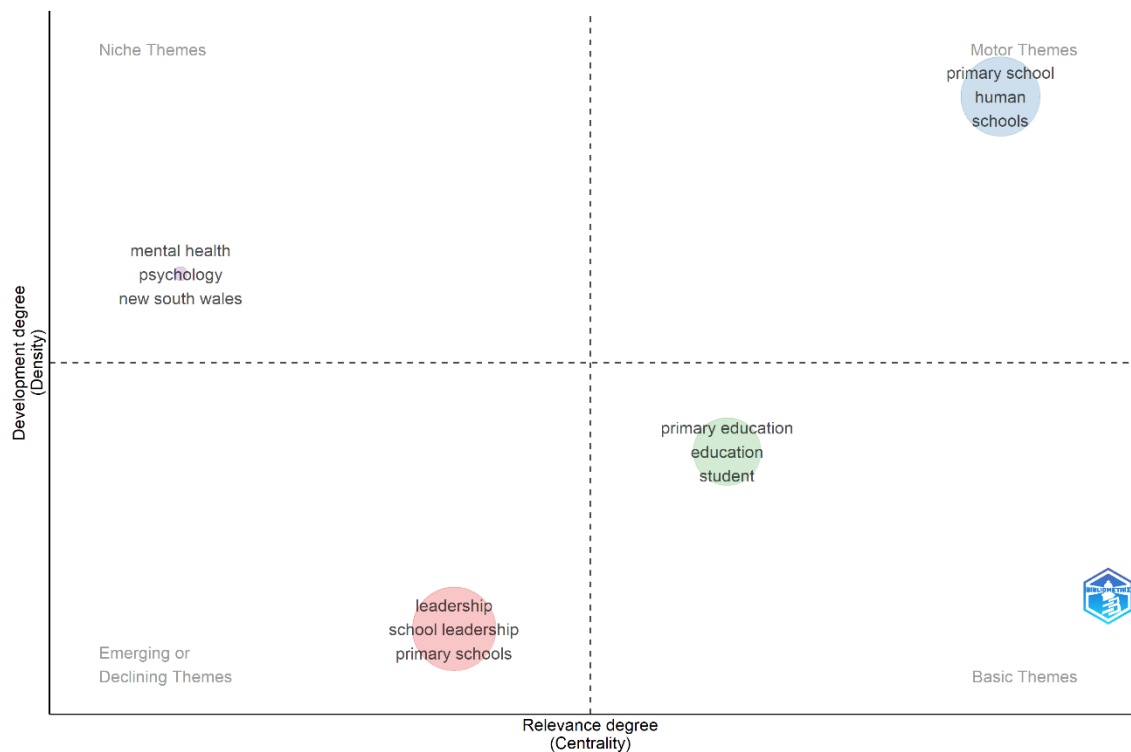


Figure 11. Thematic map

Figure 11. This Thematic Map plots the position of various research themes based on two main dimensions: centrality (the theme's relevance within the structure of the discipline) and density (the theme's level of development or depth). In the upper right quadrant (motor themes), primary school, schools, and human are

the most central and highly developed themes, meaning they drive the direction of research and serve as the primary foundation for studies of educational management in elementary schools. In the lower right quadrant (basic themes), primary education, education, and students are found, indicating that these themes are highly relevant within the discipline but still possess developing conceptual depth; they serve as the conceptual foundation for much research. Meanwhile, the lower left quadrant (emerging or declining themes) indicates that leadership, school leadership, and primary schools are at a low level of development but also have declining relevance or are undergoing transformation, possibly because the topic of leadership has evolved into more specific subthemes such as instructional, collaborative, or digital leadership. In the upper left quadrant (niche themes), topics such as mental health, psychology, and New South Wales emerge, indicating highly focused and in-depth themes but are less central to the overall research structure. Overall, this map illustrates a shift from general management and leadership themes to a stronger focus on the elementary school context, students, and learning experiences as the driving forces of contemporary research.

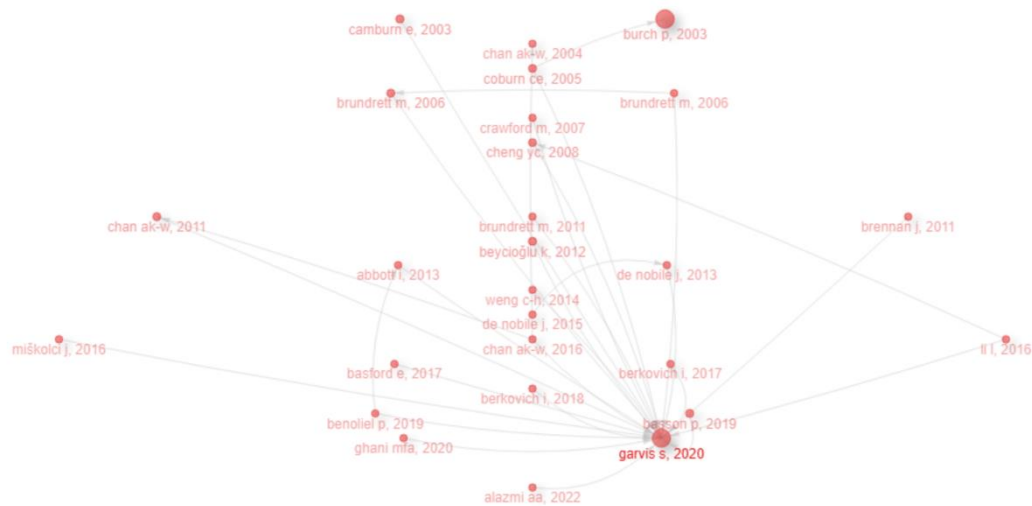


Figure 12. Histogram

The historiograph in Figure 12 illustrates the intellectual development of research on educational management in elementary schools through a network of works that reference each other over time. Early publications such as Burch (2003) and the early works of Brundrett (2006) serve as foundational points that have significantly influenced subsequent studies, as indicated by the larger node sizes and the numerous citation lines flowing to and from these works. Over time, research has evolved into increasingly diverse clusters, with the emergence of important works such as Chan (2016; 2011), De Nobile (2013, 2015), and Berkovich (2018; 2017) forming theoretical bridges to contemporary research. In the most recent phase, Garvis (2020) and several recent studies such as Alazmi (2022) have become new references that show the direction of current research developments. The thick flow of citations between nodes indicates strong conceptual relationships, indicating that the field is developing cumulatively: from more classical theories of leadership and school organization to more recent issues such as teachers' professional identity.

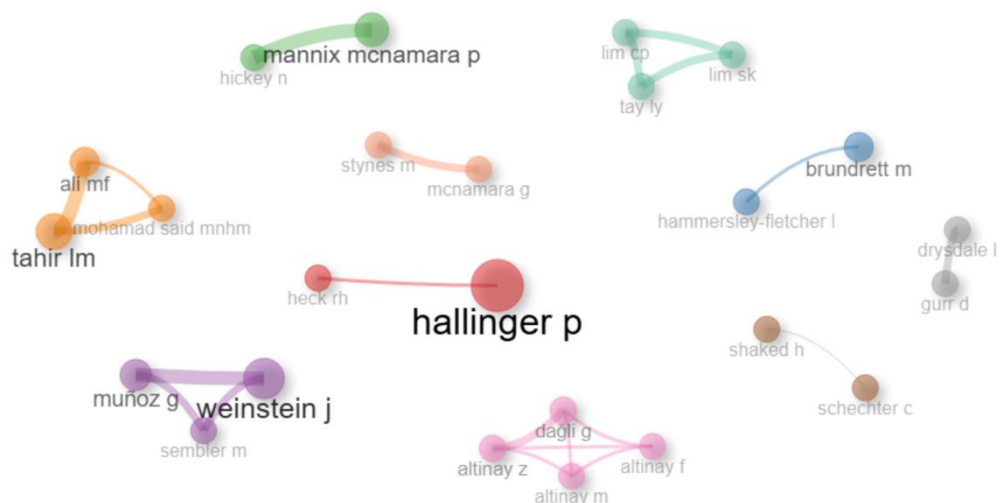


Figure 13. Collaboration Network

Figure 13: Collaboration Network illustrates the pattern of collaboration among researchers in the field of educational management in elementary schools.

Nodes (circles) represent authors, while connecting lines indicate collaboration on publications. The size of the nodes reflects the authors' productivity or influence, making it clear that Hallinger P (2014; 2011; 2017, 2018; 2010; 2019, 2023; 2014; 2018; 2017), is the most central and dominant figure in this network. Philip Hallinger's prominent and central position indicates his role as a key figure in educational leadership and management research, and his work serves as a reference and meeting point for numerous scholarly collaborations.

Surrounding him are several smaller collaborative clusters, each tending to work in a specific group. For example, the cluster involving Altinay (Z, F, M) and Dagi G (2017; 2017) demonstrates intense collaboration in research related to school management and leadership. The Weinstein J- Munoz G – Sembler M (2023; 2023) cluster indicates a group of researchers focused on educational leadership studies in the Latin American context. Meanwhile, the Brundrett M-Hammersley-Fletcher L (2005; 2008) cluster and the Mannix McNamara P-Hickey N (2022; 2023) cluster indicate a stable pattern of regional collaboration.

DISCUSSION

1. Development Education Management Research in Elementary Schools

The trajectory of increasing annual scholarly output from 2003 to 2023 reflects the significant maturation of educational management research in primary schools. The field exhibited a robust annual growth rate of 14.56%, supported by 934 papers published in 418 scholarly outlets. The sharp increase after 2012, peaking around 2021, indicates growing global attention to improving governance, instructional leadership, resource allocation, and accountability mechanisms in primary education systems. With an average document age of 8.32 years, the literature can be considered well-established and continually updated, indicating an active and evolving research landscape. This temporal pattern aligns with global reforms emphasizing quality assurance, data-driven decision-making, and inclusive schools, which have motivated scholars to explore management innovations at the primary level (Schildkamp, 2019).

The conceptual and thematic diversity within this body of literature is evident in the abundance of keywords (899 Keywords Plus; 2,343 author

keywords), reflecting multidimensional scholarly interests ranging from school leadership and teacher professional development to policy implementation and community engagement. The average citation rate of 16.13 per document indicates that research findings contribute meaningfully to theoretical and practical discussions on how managerial strategies influence student learning, school culture, and equity in early education. The large number of references (7,539) underscores the cumulative nature of inquiry in educational management, reinforcing how studies build on each other to refine frameworks for effective school governance. The predominance of journal articles (828) also indicates a strong preference for rapidly disseminating empirical and conceptual advances, supporting the rapid evolution of school management discourse (Stephens & Graham, 2010).

Collaboration patterns further illuminate the structural dynamics of the field. With 2,070 contributing authors and an average of 2.49 co-authors per document, research on elementary school management is increasingly collaborative, demonstrating that the complexity of management issues such as teacher performance, curriculum adaptation, parental engagement, or digital transformation requires an interdisciplinary perspective (Schildkamp, 2019). However, international co-authorship remains relatively low at 12.74%, signaling the need for cross-national comparative studies that can enrich understanding of contextual variations in elementary school management practices. The presence of 258 single-author papers highlights that individual scholars still play a central role in theoretical advancement, but the growing trend of multi-author studies indicates a broader shift toward collective problem-solving. Overall, these bibliometric indicators suggest that research on educational management in elementary schools is expanding in scope, strengthening in scholarly impact, and gradually moving toward global research integration, although opportunities for deeper international collaboration remain open.

2. Researchers' profile and source titles

The intellectual structure of educational management research in elementary schools is heavily shaped by a group of foundational works and influential authors, as illustrated by the Sankey diagram linking cited references,

authors, and dominant keywords. Seminal contributions such as Coburn (2005), Hallinger & Heck (2010), and Bandura (1985) social cognitive theory continue to anchor the field's conceptual development, evidenced by their sustained citation impact (e.g., Coburn's articles with 471 and 446 citations; Hallinger & Heck's with 410 citations). These influential studies foreground themes such as instructional leadership, organizational learning, and teacher sensemaking, which flow directly into the most frequently applied keywords, including leadership, school management, elementary schools, and school improvement. The convergence of these high-impact references with current research keywords demonstrates a stable theoretical lineage underpinning contemporary scholarship, suggesting that while the field is evolving, it remains heavily reliant on established conceptual frameworks.

The citation performance of top authors further highlights the centrality of leadership in shaping research trajectories. Studies by Thoonen et al. (2011) and McEwan (2015), both showing very high citation scores (14.54 and 14.44, respectively), demonstrate a strong shift in the field toward empirical evaluation of leadership practices and their impact on teacher motivation and student outcomes. Meanwhile, Leithwood et al. (2004) exhibits the highest normalized citation rate (15.07), reflecting a renewed surge of interest in leadership effectiveness and school-level decision-making, particularly in the context of accountability-driven reforms. These authors collectively form a core network of influential scholars whose methodological rigor and conceptual clarity continue to guide new researchers. The dominance of leadership-related constructs in their work aligns closely with the topical distributions demonstrated in keyword mapping, reinforcing that leadership remains the epistemic engine driving elementary school management research (Eacott, 2017; Eyal & Rom, 2015).

The evolution of source titles over time demonstrates how scholarly attention has progressively consolidated around specialized journals dedicated to school leadership and educational management. *Educational Management Administration & Leadership (EMAL)* has shown the most consistent cumulative publication growth since 2017, followed by the *International Journal of Educational*

Management and the Journal of Educational Administration. This upward trend indicates the increasing institutionalization of educational management as a distinct research domain rather than a subsidiary of broader educational studies. The emergence of School Leadership and Management and Educational Management further supports the diversification of publication outlets addressing the nuanced managerial challenges faced in elementary schools, such as teacher coaching, distributed leadership, and evidence-based school improvement (Sheard & Sharples, 2016). Taken together, the researcher profiles, citation patterns, and trajectories of source titles depict a rapidly evolving yet theoretically grounded field one that thrives on empirical innovation while remaining anchored in long-standing debates about leadership, instructional quality, and organizational capacity in elementary education systems.

3. Most Country and Collaboration

A long-term analysis of country-level scholarly production reveals substantial asymmetries in the global development of educational management research in primary schools over the past two decades. The United States exhibits clear and sustained dominance, with production increasing sharply after 2010 and surpassing 200 cumulative publications by 2023. This trajectory reflects the long-standing institutionalization of educational leadership and management as a research discipline in the US, supported by a strong funding structure, high publication capacity, and established graduate research programs. The United Kingdom follows a similar but more moderate pattern, demonstrating strong academic engagement but less systemic capacity. Australia, South Africa, and Turkey exhibit steady upward growth, suggesting emerging regional hubs where educational reform agendas and school leadership capacity development have become national priorities. These divergent trajectories underscore the global imbalance in research productivity, with high-income countries driving conceptual innovation while middle-income countries gradually expand empirical contributions rooted in local contexts (Acharya & Pathak, 2019; Kaplinsky & Kraemer-Mbula, 2022).

International collaboration patterns further reinforce this geographic divide. The global collaboration map shows dense research relationships concentrated among Anglophone countries, particularly the United States, the United Kingdom, Australia, and South Africa, forming a dominant research network that circulates shared methodologies, leadership frameworks, and policy discourse. The preponderance of these collaborations suggests that the epistemic foundations of primary education management research continue to be shaped by a Western-centric perspective, potentially limiting the representation of diverse school realities from Asia, Latin America, and the Middle East. While some cross-regional relationships exist, they remain relatively weak and are primarily driven by individual scholars rather than systemic research partnerships. This structural imbalance may hinder the development of more globally representative theories of school leadership, governance, and educational improvement.

Despite global asymmetries, the gradual emergence of publications from countries such as Turkey and South Africa signals the emergence of contextually grounded research traditions that challenge the dominance of Western epistemologies. These countries contribute empirical insights from diverse socio-cultural and policy environments, offering opportunities to expand theoretical frameworks historically developed in North American and European school systems. However, their limited presence in key collaborative networks suggests that these contributions may not yet be fully integrated into global knowledge production. Strengthening South-South and South-North collaborations could diversify methodological approaches, encourage comparative research, and reduce the risk of conceptual homogenization in the field. Overall, these findings point to the need for more equitable international research partnerships to support the development of a truly global understanding of educational management in primary schools that captures variations in governance structures, community engagement, teacher professionalism, and resource distribution across different education systems (Crossley & Holmes, 2001).

4. Word frequency and Trend Topic

In figure 9 the evolution of term frequency and trending topics over two decades reveals a substantial shift in the intellectual priorities of educational management research in elementary schools. Early research (2003–2012) largely focused on basic managerial constructs such as elementary education, school, school management, and school administration, reflecting an effort to establish conceptual clarity in school governance structures (Burch & Spillane, 2003; Camburn et al., 2003). This period exhibited relatively low term frequency and narrow thematic diversity, reflecting a developmental stage in which scholars sought to define the organizational and managerial dimensions of elementary schools. The gradual increase in the frequency of terms such as leadership and educational management beginning in the 2010s signaled the emergence of leadership as a central analytical lens, laying the groundwork for more complex explorations of how administrative practices influence school functioning (Hallinger & Heck, 2010).

Between 2013 and 2019, the research landscape evolved significantly, as reflected in the steep upward trajectory of keyword occurrences in the term frequency graph. Topics such as educational leadership, school leadership, inclusive education, and management rose to prominence, indicating a shift from structural issues to human-centered managerial processes. Trend topic visualizations show that research began to prioritize teacher behavior, instructional quality, and decision-making processes, marking a transition toward evidence-based leadership research. This period also saw the emergence of themes such as controlled trials and education policy, demonstrating increasing methodological sophistication and a growing interest in evaluating the effects of leadership and organizational interventions on student learning outcomes. The prominence of elementary and primary education during these years underscores the consistent foundation of managerial inquiry in early school contexts.

The post-2020 period featured a significant thematic expansion catalyzed by global disruptions such as COVID-19 and heightened concerns surrounding equity, parental engagement, and special education (Aguilera-Hermida et al., 2021).

Trending topics such as students, parental engagement, school improvement, and elementary school teachers dominated the 2020–2023 timeline, indicating that research has moved beyond leadership-centered discourse to examine the broader elementary school ecosystem (Alazmi & Al-Mahdy, 2022; Bruce et al., 2022; Hickey et al., 2023; Leithwood et al., 2020). The increasing frequency of terms such as academic achievement, public education, and special education indicates an intensified focus on outcomes-based management models and equity. Concurrently, the continued prominence of school leadership even as new themes emerge signals that leadership continues to serve as a stabilizing conceptual anchor in the field. Collectively, these patterns depict a field that has shifted from basic concerns to multidimensional inquiry that integrates leadership, stakeholder engagement, instructional processes, and adaptive management in response to social and educational challenges.

5. Knowledge Structures

The knowledge structure of elementary school educational management research shows distinct thematic clusters reflecting historical paradigms and emerging conceptual expansions. The thematic network in figure 11 reveals two major poles of knowledge: a leadership-centered cluster (in red) and a school-centered cluster (blue), with a smaller educational management and policy cluster (green) bridging the two. The dominance of leadership, school leadership, and elementary schools in the red cluster illustrates how leadership scholarship largely influenced by foundational theorists such as Hallinger (2019), Leithwood (2006), and Coburn (2005) has become the epistemic core of the field. These themes appear closely interconnected, exhibiting high internal cohesion but relatively limited outward connectivity. In contrast, the blue cluster, containing terms such as school, student, person, child, and elementary school, exhibits strong centrality, indicating its foundational role across multiple subfields. This structure suggests a theoretical orientation in which leadership studies provide depth while broader school constructs provide breadth and interdisciplinary reach.

The strategic diagram (centrality-density plot) further clarifies the developmental stages of these themes. Key themes such as primary school,

schooling, and people exhibit high centrality and high density, marking them as well-developed and structurally influential areas that anchor a broader knowledge base. Foundational themes, including primary education, education, and students, represent important but less structurally mature domains, suggesting they serve as conceptual entry points rather than advanced theoretical arenas. Notably, themes such as leadership, school leadership, and primary schools appear in the emerging or declining quadrants, suggesting a paradox: although leadership dominates the thematic network, its current development trajectory may be stagnant. This suggests that while leadership remains conceptually central, its theoretical expansion may reach saturation unless connected with newer themes such as well-being, equity, or digital transformation. Meanwhile, niche themes such as mental health, psychology, and specific geographic research (e.g., New South Wales) appear highly developed but marginal in centrality, suggesting specialized but isolated subfields with limited influence on the broader domain.

The evolution of knowledge structures over time is increasingly evident in co-citation networks and historiography. Influential works such as Burch (2003), Coburn (2005), and Brundrett (2006) formed the early backbone of the field, establishing key concepts in instructional leadership, organizational learning, and distributed leadership. More recent works, particularly Garvis (2020) and Berkovich (2018), demonstrate a shift toward teacher emotions, professional identity, and sociocultural perspectives on school management. This temporal layering suggests that the field has evolved from structural and administrative concerns toward more humanistic and relational dimensions of school leadership. The growing connectivity among recent authors suggests increasing theoretical integration, while the persistence of earlier works in the citation network reflects a continued reliance on classical frameworks. Thus, mapping the historiography reveals a cumulative but slowly diversifying knowledge base that blends institutional models of leadership with emerging considerations of teacher agency, school climate, and student well-being.

The authors' collaborative network reveals additional insights into the field's intellectual organization. Hallinger emerges as the most prominent node, reflecting

his long-standing influence on leadership theory and methodological guidance in educational management research. Surrounding clusters, such as those led by Brundrett (2006), Weinstein (2007), Altinay (2017), and Mannix McNamara (2022), represent smaller, more cohesive research communities contributing to specialized areas such as distributed leadership, teacher professionalism, and organizational culture. The limited interconnections among these clusters suggest that the field still operates through semi-independent research communities rather than a fully integrated network. This structural segmentation mirrors the thematic pattern observed in the strategic diagram, where certain themes remain isolated despite significant internal development. Strengthening collaboration across clusters could facilitate the emergence of a more integrated conceptual framework capable of addressing the complex managerial challenges faced by elementary schools in contemporary educational contexts.

CONCLUSION

This study provides a comprehensive understanding of how research on educational management in elementary schools has evolved over the past two decades by revealing the conceptual trajectories, thematic structures, and global research dynamics shaping the field. Bibliometric evidence suggests that elementary educational management has matured into a distinct scholarly domain characterized by a strong theoretical anchor in school leadership and evolving themes that include inclusion, parental engagement, teacher professionalism, and student well-being. The field's knowledge structure demonstrates a shift from administrative and leadership-centric discourses toward a more holistic framework that recognizes the social, emotional, and contextual dimensions of schooling. This conceptual expansion demonstrates the field's movement toward a more integrated theory of educational management that goes beyond managerial functions to engage with broader questions of equity, learning, and human development.

The implication of these findings is the emergence of a richer and more globally relevant body of knowledge in elementary school management. While research productivity is dominated by a small group of countries and collaborative networks

remain patchy, the increasing presence of diverse contexts suggests a gradual diversification of perspectives capable of challenging existing leadership paradigms. The integration of new thematic domains, particularly those related to well-being, inclusive practices, and community engagement, positions future research to refine and expand managerial theory in ways that address contemporary educational challenges. By illuminating how intellectual structures and global collaborations shape the field's evolution, this study contributes conceptually to the ongoing construction of a more comprehensive and contextually grounded knowledge base in educational management for elementary schools.

REFERENCES

Abulencia, A. S. (2012). School-Based Management: A Structural Reform Intervention. *The Normal Lights*, 6(1). <https://doi.org/10.56278/tnl.v6i1.70>

Acharya, K. P., & Pathak, S. (2019). Applied Research in Low-Income Countries: Why and How? *Frontiers in Research Metrics and Analytics*, 4. <https://doi.org/10.3389/frma.2019.00003>

Aguilera-Hermida, A. P., Quiroga-Garza, A., Gómez-Mendoza, S., Del Río Villanueva, C. A., Avolio Alecchi, B., & Avci, D. (2021). Comparison of students' use and acceptance of emergency online learning due to COVID-19 in the USA, Mexico, Peru, and Turkey. *Education and Information Technologies*, 26(6), 6823–6845. <https://doi.org/10.1007/s10639-021-10473-8>

Alajmi, M. (2022). School principals' experiences of autonomy and accountability: outcomes of the School Education Quality Improvement Project in Kuwait. *International Journal of Educational Management*, 36(4), 606–617. <https://doi.org/10.1108/IJEM-09-2021-0366>

Alazmi, A. A., & Al-Mahdy, Y. F. H. (2022). Principal authentic leadership and teacher engagement in Kuwait's educational reform context. *Educational Management Administration & Leadership*, 50(3), 392–412. <https://doi.org/10.1177/1741143220957339>

Alrasheedi, G., & Almutawa, F. (2022). The Nature of School-Based Management in Independent Schools in the State of Qatar: An Analytical Study. *Journal of School Choice*, 16(2), 235–257. <https://doi.org/10.1080/15582159.2021.1994278>

Aria, M., & Cuccurullo, C. (2017). bibliometrix : An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, 11(4), 959–975. <https://doi.org/10.1016/j.joi.2017.08.007>

Bandur, A., Hamsal, M., & Furinto, A. (2022). 21st Century experiences in the development of school-based management policy and practices in Indonesia. *Educational Research for Policy and Practice*, 21(1), 85–107. <https://doi.org/10.1007/s10671-021-09293-x>

Bandura, A. (1985). *Prentice-Hall series in social learning theory. Social foundations of thought and action: A social cognitive theory*. Prentice-Hall, Inc.

Bandura, A. (1986). Social foundations of thought and action. *Englewood Cliffs, NJ, 1986*(23–28), 2.

Bellibaş, M. Ş., Gümüş, S., & Liu, Y. (2021). Does school leadership matter for teachers' classroom practice? The influence of instructional leadership and distributed leadership on instructional quality. *School Effectiveness and School Improvement*, 32(3), 387–412. <https://doi.org/10.1080/09243453.2020.1858119>

Berkovich, I. (2018). Effects of Principal-Teacher Gender Similarity on Teacher's Trust and Organizational Commitment. *Sex Roles*, 78(7–8), 561–572. <https://doi.org/10.1007/s11199-017-0814-3>

Berkovich, I., & Eyal, O. (2017). Emotional reframing as a mediator of the relationships between transformational school leadership and teachers' motivation and commitment. *Journal of Educational Administration*, 55(5), 450–468. <https://doi.org/10.1108/JEA-07-2016-0072>

Bossert, S. T., Dwyer, D. C., Rowan, B., & Lee, G. V. (1982). The Instructional Management Role of the Principal. *Educational Administration Quarterly*, 18(3), 34–64. <https://doi.org/10.1177/0013161X82018003004>

Bruce, P., Bruce, C., Hrymak, V., Hickey, N., & Mannix McNamara, P. (2022). Staff Stress and Interpersonal Conflict in Secondary Schools—Implications for School Leadership. *Societies*, 12(6), 186. <https://doi.org/10.3390/soc12060186>

Brundrett, M. (2006). The impact of leadership training: stories from a small school. *Education 3-13*, 34(2), 173–183. <https://doi.org/10.1080/03004270600670540>

Burch, P., & Spillane, J. P. (2003). Elementary School Leadership Strategies and Subject Matter: Reforming Mathematics and Literacy Instruction. *The Elementary School Journal*, 103(5), 519–535. <https://doi.org/10.1086/499738>

Camburn, E., Rowan, B., & Taylor, J. E. (2003). Distributed Leadership in Schools: The Case of Elementary Schools Adopting Comprehensive School Reform Models. *Educational Evaluation and Policy Analysis*, 25(4), 347–373. <https://doi.org/10.3102/01623737025004347>

Chan, A. K., Ngai, G. S., & Choi, P. (2016). Contextualising the career pathways of women principals in Hong Kong: a critical examination. *Compare: A Journal of Comparative and International Education*, 46(2), 194–213. <https://doi.org/10.1080/03057925.2014.884919>

Chan, A. K. W. (2011). Feminising and masculinising primary teaching: a critical examination of the interpretive frameworks of male primary school principals in Hong Kong. *Gender and Education*, 23(6), 745–759. <https://doi.org/10.1080/09540253.2011.611041>

Chen, H. E., Sun, D., Hsu, T.-C., Yang, Y., & Sun, J. (2023). Visualising trends in computational thinking research from 2012 to 2021: A bibliometric analysis. *Thinking Skills and Creativity*, 47, 101224. <https://doi.org/10.1016/j.tsc.2022.101224>

Cheng, Y. C. (2022). *School Effectiveness and School-Based Management*. Routledge. <https://doi.org/10.4324/9781003267980>

Coburn, C. E. (2005). Shaping Teacher Sensemaking: School Leaders and the Enactment of Reading Policy. *Educational Policy*, 19(3), 476–509. <https://doi.org/10.1177/0895904805276143>

Constantinides, M. (2022). High-stakes accountability policies and local adaptation: exploring how school principals respond to multiple policy demands. *School Leadership & Management*, 42(2), 170–187. <https://doi.org/10.1080/13632434.2021.2016687>

Crossley, M., & Holmes, K. (2001). Challenges for Educational Research: International development, partnerships and capacity building in small states. *Oxford Review of Education*, 27(3), 395–409. <https://doi.org/10.1080/03054980120067429>

Darling-Hammond, L. (2004). Standards, Accountability, and School Reform. *Teachers College Record: The Voice of Scholarship in Education*, 106(6), 1047–1085. <https://doi.org/10.1111/j.1467-9620.2004.00372.x>

Day, C., Gu, Q., & Sammons, P. (2016). The Impact of Leadership on Student Outcomes. *Educational Administration Quarterly*, 52(2), 221–258. <https://doi.org/10.1177/0013161X15616863>

- De Nobile, J., London, T., & El Baba, M. (2015). Whole school behaviour management and perceptions of behaviour problems in Australian primary schools. *Management in Education*, 29(4), 164–171. <https://doi.org/10.1177/0892020615589135>
- De Nobile, J., McCormick, J., & Hoekman, K. (2013). Organizational communication and occupational stress in Australian Catholic primary schools. *Journal of Educational Administration*, 51(6), 744–767. <https://doi.org/10.1108/JEA-09-2011-0081>
- DeMatthews, D. E. (2014). Principal and Teacher Collaboration: An Exploration of Distributed Leadership in Professional Learning Communities. *International Journal of Educational Leadership and Management*, 2(2), 176–206. <https://doi.org/10.4471/ijelm.2014.16>
- DeMatthews, D. E., Knight, D. S., & Shin, J. (2022). The Principal-Teacher Churn: Understanding the Relationship Between Leadership Turnover and Teacher Attrition. *Educational Administration Quarterly*, 58(1), 76–109. <https://doi.org/10.1177/0013161X211051974>
- Eacott, S. (2017). A social epistemology for educational administration and leadership. *Journal of Educational Administration and History*, 49(3), 196–214. <https://doi.org/10.1080/00220620.2017.1315380>
- Echchakoui, S. (2020). Why and how to merge Scopus and Web of Science during bibliometric analysis: the case of sales force literature from 1912 to 2019. *Journal of Marketing Analytics*, 8(3), 165–184. <https://doi.org/10.1057/s41270-020-00081-9>
- Eyal, O., & Rom, N. (2015). Epistemological trends in educational leadership studies in Israel: 2000-2012. *Journal of Educational Administration*, 53(5), 574–596. <https://doi.org/10.1108/JEA-01-2014-0009>
- Fedai, L., Tarhini, A., Altinay, Z., Dağlı, G., & Altinay, F. (2017). Occupational burnout and job satisfaction: Evidence from secondary schools in Northern Cyprus. *International Journal of Economic Perspectives*, 11(1), 782–794. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85033446385&partnerID=40&md5=db1c2bd75069ebfbf39f3d7e41368eff>
- Garvis, S., & Uusimaki, L. (2020). Leadership. In *Teaching Primary Years* (hal. 98–114). Routledge. <https://doi.org/10.4324/9781003117797-6>

H. Heck, R., & Hallinger, P. (2014). Modeling the longitudinal effects of school leadership on teaching and learning. *Journal of Educational Administration*, 52(5), 653–681. <https://doi.org/10.1108/JEA-08-2013-0097>

Hallinger, P. (2011). A Review of Three Decades of Doctoral Studies Using the Principal Instructional Management Rating Scale: A Lens on Methodological Progress in Educational Leadership. *Educational Administration Quarterly*, 47(2), 271–306. <https://doi.org/10.1177/0013161X10383412>

Hallinger, P., & Heck, R. H. (2010). Collaborative leadership and school improvement: understanding the impact on school capacity and student learning. *School Leadership & Management*, 30(2), 95–110. <https://doi.org/10.1080/13632431003663214>

Hallinger, P., Hosseingholizadeh, R., Hashemi, N., & Kouhsari, M. (2018). Do beliefs make a difference? Exploring how principal self-efficacy and instructional leadership impact teacher efficacy and commitment in Iran. *Educational Management Administration & Leadership*, 46(5), 800–819. <https://doi.org/10.1177/1741143217700283>

Hallinger, P., & Kovačević, J. (2019). A Bibliometric Review of Research on Educational Administration: Science Mapping the Literature, 1960 to 2018. *Review of Educational Research*, 89(3), 335–369. <https://doi.org/10.3102/0034654319830380>

Hallinger, P., & Kovačević, J. (2023). Applying bibliometric review methods in education: rationale, definitions, analytical techniques, and illustrations. In *International Encyclopedia of Education (Fourth Edition)* (hal. 546–556). Elsevier. <https://doi.org/10.1016/B978-0-12-818630-5.05070-3>

Hallinger, P., & Lu, J. (2014). Modelling the effects of principal leadership and school capacity on teacher professional learning in Hong Kong primary schools. *School Leadership & Management*, 34(5), 481–501. <https://doi.org/10.1080/13632434.2014.938039>

Hallinger, P., & Murphy, J. (1985). Assessing the Instructional Management Behavior of Principals. *The Elementary School Journal*, 86(2), 217–247. <https://doi.org/10.1086/461445>

Hallinger, P., Walker, A., Nguyen, D. T. H., Truong, T., & Nguyen, T. T. (2017). Perspectives on principal instructional leadership in Vietnam: a preliminary model. *Journal of Educational Administration*, 55(2), 222–239. <https://doi.org/10.1108/JEA-11-2015-0106>

Hammersley-fletcher, L., & Brundrett, M. (2005). Leaders on leadership: the impressions of primary school head teachers and subject leaders. *School Leadership & Management*, 25(1), 59–75. <https://doi.org/10.1080/1363243052000317064>

Hammersley-Fletcher, L., & Brundrett, M. (2008). Collaboration, collegiality and leadership from the head. *Management in Education*, 22(2), 11–16. <https://doi.org/10.1177/0892020608088799>

Haryati, W., Kristiawan, M., & Puspita, Y. (2021). *School Principal Strategy in Improving the School Based Management Through the Quality of Education*. <https://doi.org/10.2991/assehr.k.210716.114>

Hickey, N., Flaherty, A., & Mannix McNamara, P. (2023). Distributed Leadership in Irish Post-Primary Schools: Policy versus Practitioner Interpretations. *Education Sciences*, 13(4), 388. <https://doi.org/10.3390/educsci13040388>

Kaplinsky, R., & Kraemer-Mbula, E. (2022). Innovation and uneven development: The challenge for low- and middle-income economies. *Research Policy*, 51(2), 104394. <https://doi.org/10.1016/j.respol.2021.104394>

Keshavarz, N., Nutbeam, D., Rowling, L., & Khavarpour, F. (2010). Schools as social complex adaptive systems: A new way to understand the challenges of introducing the health promoting schools concept. *Social Science & Medicine*, 70(10), 1467–1474. <https://doi.org/10.1016/j.socscimed.2010.01.034>

Kulophas, D., Hallinger, P., Ruengtrakul, A., & Wongwanich, S. (2018). Exploring the effects of authentic leadership on academic optimism and teacher engagement in Thailand. *International Journal of Educational Management*, 32(1), 27–45. <https://doi.org/10.1108/IJEM-10-2016-0233>

Leithwood, K., & Jantzi, D. (2006). Transformational school leadership for large-scale reform: Effects on students, teachers, and their classroom practices. *School Effectiveness and School Improvement*, 17(2), 201–227. <https://doi.org/10.1080/09243450600565829>

Leithwood, K., Seashore, K., Anderson, S., & Wahlstrom, K. (2004). *Review of research: How leadership influences student learning*. University of Minnesota, Center for Applied Research and Educational Improvement.

Leithwood, K., Sun, J., & Schumacker, R. (2020). How School Leadership Influences Student Learning: A Test of “The Four Paths Model.” *Educational Administration Quarterly*, 56(4), 570–599. <https://doi.org/10.1177/0013161X19878772>

Marfán, J., Muñoz, G., Weinstein, J., & Sembler, M. (2023). School Leadership Policy and Change in Principals' Practices. Evidence after a Decade of Reforms in Chile (2009-2019). *Leadership and Policy in Schools*, 22(4), 857–872. <https://doi.org/10.1080/15700763.2021.2010767>

Matebe, T. G. (2014). Perceptions about instructional leadership: The perspectives of a principal and teachers of Birakat Primary School in focus. *Educational Research and Reviews*, 9(16), 542–550. <https://doi.org/10.5897/ERR2014.1841>

McEwan, P. J. (2015). Improving Learning in Primary Schools of Developing Countries. *Review of Educational Research*, 85(3), 353–394. <https://doi.org/10.3102/0034654314553127>

Muñoz, G., Weinstein, J., & Sembler, M. (2023). “Contingency”, an overlooked factor by school leadership: evidence from primary urban schools in Chile. *Journal of Educational Administration*, 61(1), 41–59. <https://doi.org/10.1108/JEA-05-2022-0070>

Ochmann, S., Owolabi, K. E., Olatunji-David, F., Okunlola, N., & Vollmer, S. (2022). The impact of grants in combination with school-based management trainings on primary education: a cluster-randomized trial in Northern Nigeria. *Journal of Development Effectiveness*, 14(3), 189–208. <https://doi.org/10.1080/19439342.2021.2007980>

Özberk, K., Dağlı, G., Altınay, F., & Altınay, Z. (2017). Job burnout among teachers in secondary education. *International Journal of Economic Perspectives*, 11(1), 720–729. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85033478507&partnerID=40&md5=910a6c0341424854a3ae64f993476ddf>

Piyaman, P., Hallinger, P., & Viseshsiri, P. (2017). Addressing the achievement gap. *Journal of Educational Administration*, 55(6), 717–734. <https://doi.org/10.1108/JEA-12-2016-0142>

Printy, S., & Liu, Y. (2021). Distributed Leadership Globally: The Interactive Nature of Principal and Teacher Leadership in 32 Countries. *Educational Administration Quarterly*, 57(2), 290–325. <https://doi.org/10.1177/0013161X20926548>

Ross, J. A., & Gray, P. (2006). School Leadership and Student Achievement: The Mediating Effects of Teacher Beliefs. *Canadian Journal of Education / Revue canadienne de l'éducation*, 29(3), 798. <https://doi.org/10.2307/20054196>

Schildkamp, K. (2019). Data-based decision-making for school improvement: Research insights and gaps. *Educational Research*, 61(3), 257–273. <https://doi.org/10.1080/00131881.2019.1625716>

Sebastian, J., & Allensworth, E. (2012). The Influence of Principal Leadership on Classroom Instruction and Student Learning. *Educational Administration Quarterly*, 48(4), 626–663. <https://doi.org/10.1177/0013161X11436273>

Sheard, M. K., & Sharples, J. (2016). School leaders' engagement with the concept of evidence-based practice as a management tool for school improvement. *Educational Management Administration & Leadership*, 44(4), 668–687. <https://doi.org/10.1177/1741143215580138>

Sinkovics, N. (2016). Enhancing the foundations for theorising through bibliometric mapping. *International Marketing Review*, 33(3), 327–350. <https://doi.org/10.1108/IMR-10-2014-0341>

Spillane, J. P. (2003). Educational Leadership. *Educational Evaluation and Policy Analysis*, 25(4), 343–346. <https://doi.org/10.3102/01623737025004343>

Stephens, J. C., & Graham, A. C. (2010). Toward an empirical research agenda for sustainability in higher education: exploring the transition management framework. *Journal of Cleaner Production*, 18(7), 611–618. <https://doi.org/10.1016/j.jclepro.2009.07.009>

Thoonen, E. E. J., Slegers, P. J. C., Oort, F. J., Peetsma, T. T. D., & Geijsel, F. P. (2011). How to Improve Teaching Practices. *Educational Administration Quarterly*, 47(3), 496–536. <https://doi.org/10.1177/0013161X11400185>

Weinstein, H. M., Freedman, S. W., & Hughson, H. (2007). School voices: Challenges facing education systems after identity-based conflicts. *Education, Citizenship and Social Justice*, 2(1), 41–71. <https://doi.org/10.1177/1746197907072128>