MALAYSIAN ONLINE JOURNAL OF EDUCATIONAL MANAGEMENT (MOJEM)

APRIL 2025, VOLUME 13, ISSUE 2, 50-66
E-ISSN NO: 2289 – 4489

STRATEGIC LEADERSHIP IN EDUCATION: MAPPING ACADEMIC CONTRIBUTIONS AND FUTURE DIRECTIONS

Nur Diyana Zakariah[1], *Muhammad Faizal A. Ghani[1], *Norfariza Mohd Radzi[1], Haryati Kamarrudin[2]

[1] Department of Educational Management, Planning and Policy, Faculty of Education, Universiti Malaya, Kuala Lumpur

[2] Training Development Department, Malaysia Teacher Education Institute, Campus of Islamic Studies, Selangor

Corresponding Authors:
Department of Educational Management, Planning and Policy, Faculty of Education, Universiti Malaya, Kuala Lumpur
mdfaizal@um.edu.my
norfariza@um.edu.my

ABSTRACT

Strategic leadership is crucial for educational leaders, and studies in other fields have been implemented. However, research on strategic leadership in education remains limited. This study presents a bibliometric analysis of publications on educational strategic leadership from the Scopus database between 1982 and 2022. 992 papers were retrieved by utilising the keywords associated with strategic leadership in education found in the article title, abstract, and keywords of the study for further evaluation using various techniques. We employed Microsoft Excel for frequency analysis, VOS Viewer for data visualisation, and Harzing's Publish or Perish for citation metrics and analysis. This study presents findings utilising standard bibliometric indicators, including research productivity, titles of active sources, publication distribution by nation, the most prolific institutions, the most active authors, and citation analysis. There was a substantial increase in academic publications on strategic leadership in education. A group of 160 writers from 87 distinct countries and 160 institutions have conducted numerous research projects concerning strategic leadership in education. Various academic journals have disseminated these works. The results of this investigation and its consequences can assist scholars in comprehending the intricacies of strategic leadership in education and offer them important knowledge about contemporary studies and future developments in this domain.

Keywords: **Leadership, strategic leadership, education, bibliometric analysis, research trends.**

INTRODUCTION

The concept of leadership is constantly evolving according to the current context and needs. Educational institutions around the world face difficulties in adapting to a changing world. More dynamic approaches are needed, including a focus on outcomes, participation subject to decision-making, more flexible organizational structures, and a culture of shared responsibility (Bolman & Deal, 2017; Dacholfany et al., 2024; Elżbieta Rak-Młynarska, 2022; Grishnova & Panchenko, 2022). These shortcomings are mostly expressed in a rapidly changing environment where the need for high-quality education is always changing. The need for effective leadership has never been greater, and strategic leadership has become crucial.

Within educational leadership, strategic leaders have a crucial impact on the formation of policies, the creation of curriculum, and the allocation of resources. Their responsibility is to establish a conducive climate that promotes exceptional teaching and learning, facilitates the growth of professionals, and stimulates active participation from all stakeholders (Carvalho et al., 2021). Strategic leadership helps educational institutions adapt and prosper by managing the present and planning for the future. It involves establishing a clear vision and direction aligned with broader educational contexts, as noted by Davies and Davies (2009, 2010), Solly (2021), and Suharto (2023). Moreover, Nur Diyana Zakariah et al. (2023) and O'Connor (2017) mention that strategic leadership need to anticipate and respond to changes. Additionally, Ilminza Zakaria et al. (2021) and Siti Noor Ismail et al. (2018) clarify that external factors, such as teacher quality, are essential for improving student outcomes.

Strategic leadership differs from other types of leadership because it focuses on long-term institutional sustainability rather than short-term changes in how things are taught or how people think in general. For instance, instructional leadership is mostly concerned with improving teaching quality and student performance through curriculum and instructional supervision (Hallinger & Murphy, 1985). Although improving classroom learning mostly depends on instructional leadership, it sometimes lacks a more comprehensive strategic vision for institutional development. On the other hand, transformative leadership prioritises cultural and institutional change, thereby promoting equity, inclusivity, and empowerment (Leithwood et al., 2021) Transformative leadership, meanwhile, might ignore long-term, regimented institutional plans needed for sustainable development. Combining aspects of both models, strategic leadership guarantees that institutions will not only experience temporary educational gains but also long-term organisational success (Davies & Davies, 2010)

Leaders employing a strategic approach are better equipped to navigate the complexities of the educational landscape, ensuring that their institutions remain relevant and effective (Bush, 2021; Tan et al., 2024). This point of view aligns with the perspective that strategic leadership is a resilient framework that bridges contemporary and traditional leadership in a post-modern context (Adobor et al., 2021; Shin & Park, 2021; Spain & Woodruff, 2022). Furthermore, to effectively navigate a dynamic world, school leaders must acquire new skills (Nisar et al., 2019), demonstrate proficiency in objective management (Bush, 2023), and possess the ability to adjust to various situations (Awodiji et al., 2023; Drucker, 2017). According to Marisa Carvalho's scoping review, only a few studies have addressed strategic leadership in educational institutions.

A conceptual framework guided by bibliometric insights can help to direct strategic educational decision-making. Three linked components make up the framework: evidence-based decision-making, which makes use of bibliometric research to direct practice and policy; visionary planning, which guarantees that the goals of the institution match more general educational settings; and adaptive leadership, which lets the institution change with the times. This bibliometric study contributes to the understanding of strategic leadership in educational contexts. It highlights continuous research attempts to explore strategic leadership in education through a comprehensive analysis of academic papers, identifying core themes and patterns and understanding their development over time, providing a comprehensive understanding of the current knowledge base.

Join us in exploring the scholarly seas, where we set sail to map the strategic leadership trends in education to illuminate the path forward in this crucial realm of academia and practice. This paper analyses Strategic Leadership in Education through bibliometric analysis, focusing on three primary research questions:

i) How has the development and dissemination of research on Strategic Leadership in Education evolved?
ii) Who are the primary contributors to research on Strategic Leadership in Education, and what are their collaborative aims?
iii) What are the primary subject areas that have been examined in the area of Strategic Leadership in Education?

METHODOLOGY

Bibliometric analysis is a systematic approach to quantifying and examining scholarly publications. Moreover, bibliometric research is a quantitative design that uses statistical techniques to measure and analyse textual content and information in published articles (Passas, 2024; Ramos et al., 2024). Researchers use bibliometric analysis to track the trend of increasingly popular studies (Ahmi et al., 2019; Dong et al., 2024), insight into patterns of knowledge production and accumulation (Hallinger & Kovačević, 2023), and visualise bibliometric networks (Kamarrudin et al., 2022). Furthermore, the bibliometric analysis results might be used to advise academics in doing extensive and well-informed research and to help clarify the aspects linked with the influence of studies in a certain field of study (Gaviria-Marin et al., 2019).

Choosing a database is important for the beginning of consideration. Commonly used databases for database selection include Web of Science (WoS), Scopus, Education Resources Information Centres (ERIC), Science Direct, and Emerald. Database inclusion is an essential aspect of this study as it enables the analysis of the progression and conceptual framework of previous research. Conversely, Feng et al. (2017) concurred that the Scopus database offers broader coverage than the WoS database. Additionally, as Cobo et al. (2011) highlighted, Scopus is a highly effective indexed database that can export information and publish data across several research areas. Based on the assertions made before, Scopus is the source chosen for this study.

Identification of Sources

The Priority Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) is used in this study to provide systematic literature reviews (Moher et al., 2009; Zakaria et al., 2021). First, the search string "Strategic Leadership" AND "Education" inside the study title, abstract, and keyword sections was accessed using the Scopus search engine as the main source of documents. While Scopus is recognized as a highly extensive repository for academic literature (Ahmi et al., 2019; Sweileh et al., 2018), it is intriguing to see the additional valuable information that may be derived when it is used with other databases.

Inclusion and Exclusion Criteria

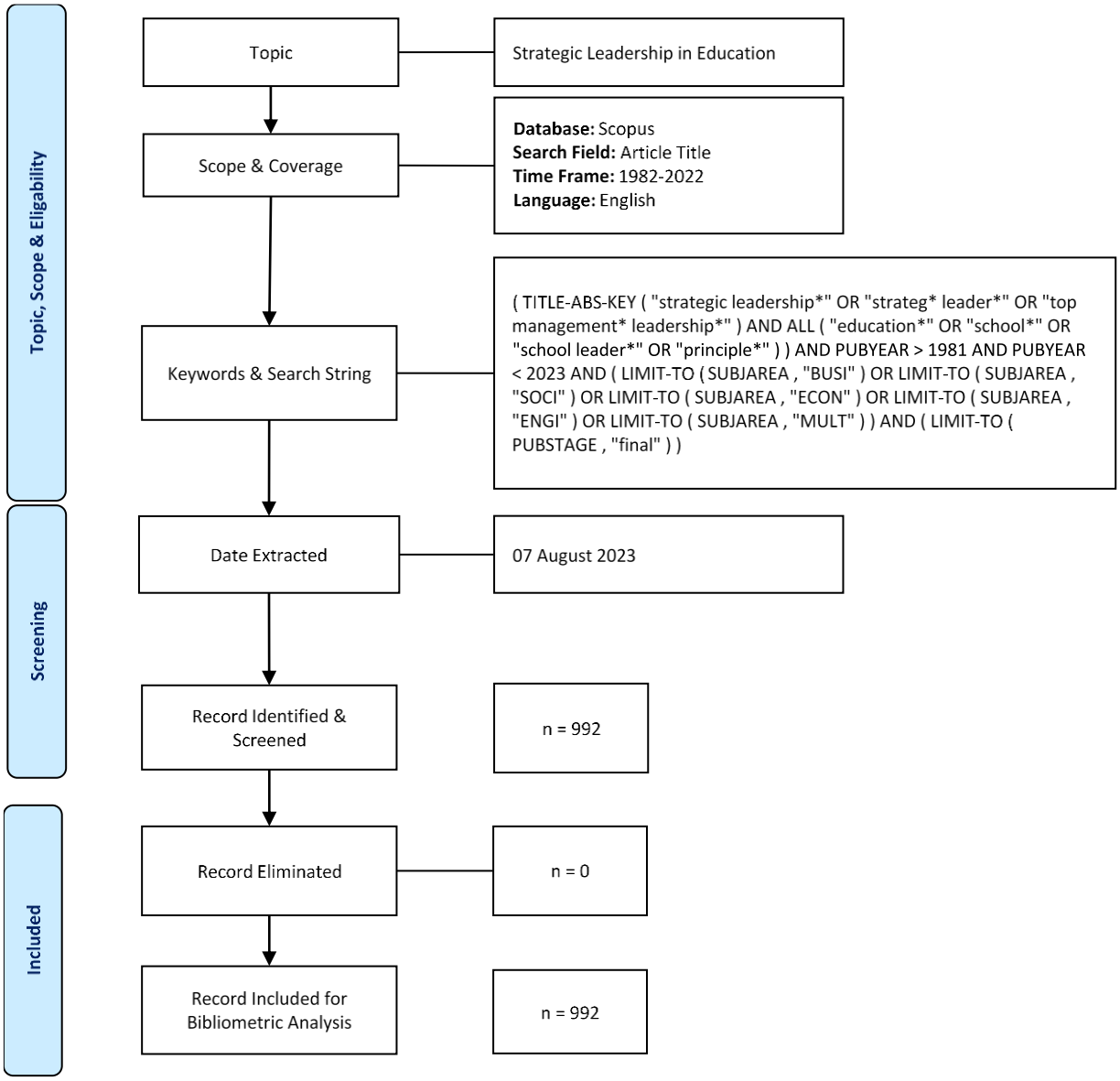
This study's scope was defined by excluding parameters like search field, period, source type, topic area, and document type. Another factor to consider is establishing a specific time frame. This study, in line with the concept of research field maturity as outlined by Kraus et al. (2020), restricted the screening process to publications from 1982 to 2022. Consequently, we designated the period from 1982 to 2022 as a criterion for inclusion. Upon reviewing the abstracts of all papers on the list, we conducted additional exclusions based on the significance of the subjects. Subsequently, researchers must verify through a series of steps whether the documents satisfy the inclusion and exclusion criteria outlined in Figure 1.

Data Extraction and Analysis

We utilize various methods to assess study results, including using the search results analysis function from Scopus, transferring results to Excel files in CSV and RIS format, and removing all findings, including cumulative percentages and percentages. Besides, we use the Publish and Perish Harzing programs to calculate quotation metrics. VOSviewer

also describes the bibliometric chain as an open-source program that creates and visualizes the chain (Punj et al., 2023; van Eck & Waltman, 2010). The study aims to offer valuable insights into publishing patterns related to strategic leadership in education.

Figure 1. *Flowchart of the Search Strategy*



Although bibliometric analysis is really helpful, researchers should consider numerous considerations, including several restrictions. One major issue is choosing a single database, such as Scopus, which could not include pertinent research indexed elsewhere, therefore influencing the outcomes (Feng et al., 2017; Gavel & Iselid, 2008). Moreover, keyword sensitivity might affect the accuracy of acquired data as synonyms, synonyms, and terminology variations could either exclude or include significant research to be missed or irrelevant. To help solve this problem, we may thus do sensitivity tests by evaluating different keyword combinations and gradually enhancing search methods. Combining bibliometric results with qualitative content analysis and professional validation helps to improve reliability and offers a full knowledge of strategic leadership in education.

FINDINGS

We utilised Scopus data to examine bibliometric variables, including research productivity, the most active source title, publication distribution by country, the most active universities, the most productive authors, and citation analyses. Document selection was based on their publication year (1982–2022), subject area, document type, and source type. We present most findings in frequency and percentage format, using VOSviewer to visualise the co-occurrence of author keywords. We have divided the data analysis into multiple segments based on the research inquiries.

Development And Dissemination of Research on Strategic Leadership in Education

The primary research question of this study seeks to examine the development and dissemination of Strategic Leadership in Education research by analysing (a) publications according to language and (b) research productivity.

Publications According to Languages. According to Table 1, English was the predominant language, representing 98.69% of the 992 articles on Strategic Leadership in Education study. Spanish was adopted as a secondary language in publications; however, it was only recorded in 0.40% of occurrences. Followed by Chinese language 0.30% and Portuguese language 0.20%. The rest of the articles were published in four distinct languages: Japanese, Persian, Russian, and Turkish. Nevertheless, each of these languages accounted for only 0.10%.

Table 1. ***Type of Languages***

Language	Total Publications (TP)*	Percentage (%)
English	980	98.69%
Spanish	4	0.40%
Chinese	3	0.30%
Portuguese	2	0.20%
Japanese	1	0.10%
Persian	1	0.10%
Russian	1	0.10%
Turkish	1	0.10%
Total	992	**100.00**

Productivity in Research. This subsequent analysis assessed research productivity based on the annual quantity of documents released. According to Figure 2, there has been consistent growth in the number of publications over the years, reaching its peak in 2022 with a focus on strategic leadership. We anticipate that this upward trend will persist. The number of referenced papers consistently increased throughout the years, reaching its peak in 2011 with 2364 cited publications on active participation. The chart presents a comprehensive summary of the publication's years of strategic leadership from 1982 to 2022. The academic discourse on strategic leadership is extensive, as evidenced by the extensive published literature on the subject.

Figure 2. *Total Publications and Citations on Strategic Leadership from 1982-2022*

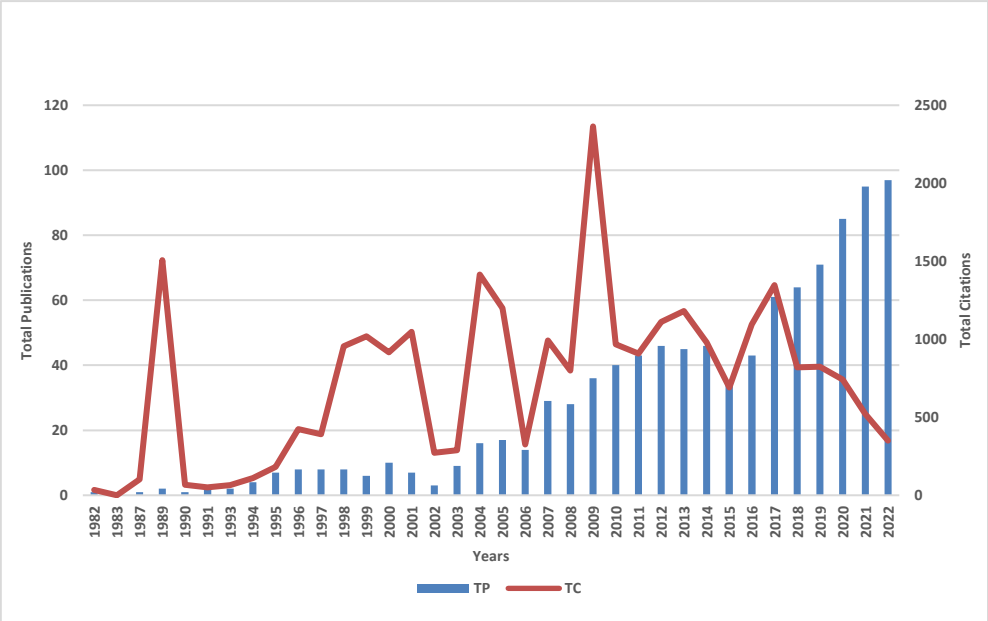


Figure 2 illustrates the annual productivity and impact of research on strategic leadership from 1982 to 2022, providing valuable insights into the evolution of this field. The data reveals a steady publication growth, culminating in 2022 with the highest number of articles published, reflecting the increasing relevance and interest in strategic leadership research. Citations, which serve as an indicator of a publication's influence and scholarly impact, peaked in 2011 with 2,364 citations. This peak suggests a significant breakthrough or widely referenced contributions during this period, likely indicating the publication of seminal works or the maturation of theoretical frameworks within the strategic leadership domain.

Primary Contributors to Research on Strategic Leadership in Education and Their Collaborative Aims

The primary contributors to research on Strategic Leadership in Education and examine their collaborative aims. This study aimed to examine the features of research on Strategic Leadership in Education by interpreting (a) the top countries contributing to publications, (b) the greatest influential institutions, (c) the core journals, (d) the analysis of citations, (e) the authorship analysis, and (f) the most productive authors.

Top Countries Contribute to The Publication. This article examines how many country-based publications are published by the author's affiliated institution. Between 1982 and 2022, Table 3 shows the top ten active countries concerning strategic leadership in education. The United States produces the most publications (289), representing 29.13% of the total publications on strategic leadership in education, compared to the United Kingdom (154). Less than 100 articles consisted of the remaining distribution of authors' country connections, including Australia, Canada, China, Malaysia, Germany, South Africa, India, and Turkey. Strategic leadership in educational research is crucial across different geographical areas. Figure 2 illustrates the regional distribution of publications across the primary countries.

Table 2. *Top 10 Countries Contribution of Publication*

Country	TP	NCP	TC	C/P	C/CP	*h*	*g*
United States	289	248	17071	59.07	68.83	62	127
United Kingdom	154	136	3254	21.13	23.93	29	52
Australia	80	66	1046	13.08	15.85	20	30
Canada	49	44	2373	48.43	53.93	19	48
China	41	30	541	13.20	18.03	13	22
Malaysia	41	30	392	9.56	13.07	9	19
Germany	35	34	804	22.97	23.65	17	28
South Africa	29	21	157	5.41	7.48	7	12
India	26	19	439	16.88	23.11	10	20
Turkey	25	23	117	4.68	5.09	6	9

Notes: TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; and g=g-index.

Figure 3. *Geographical Distribution of Publication*

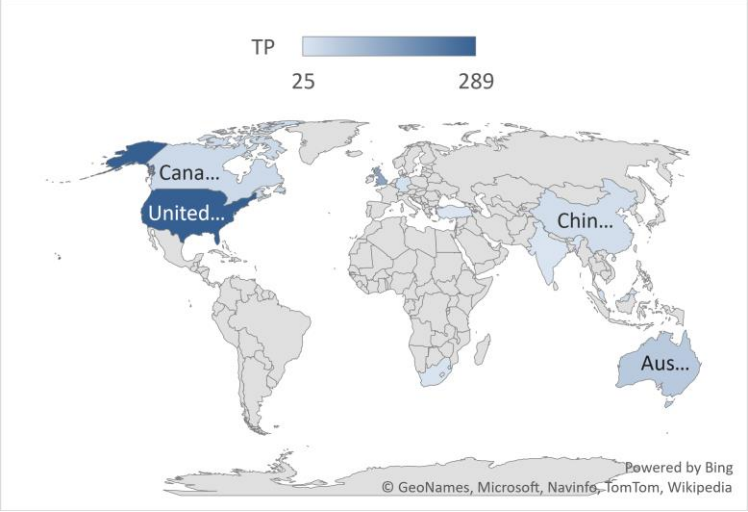
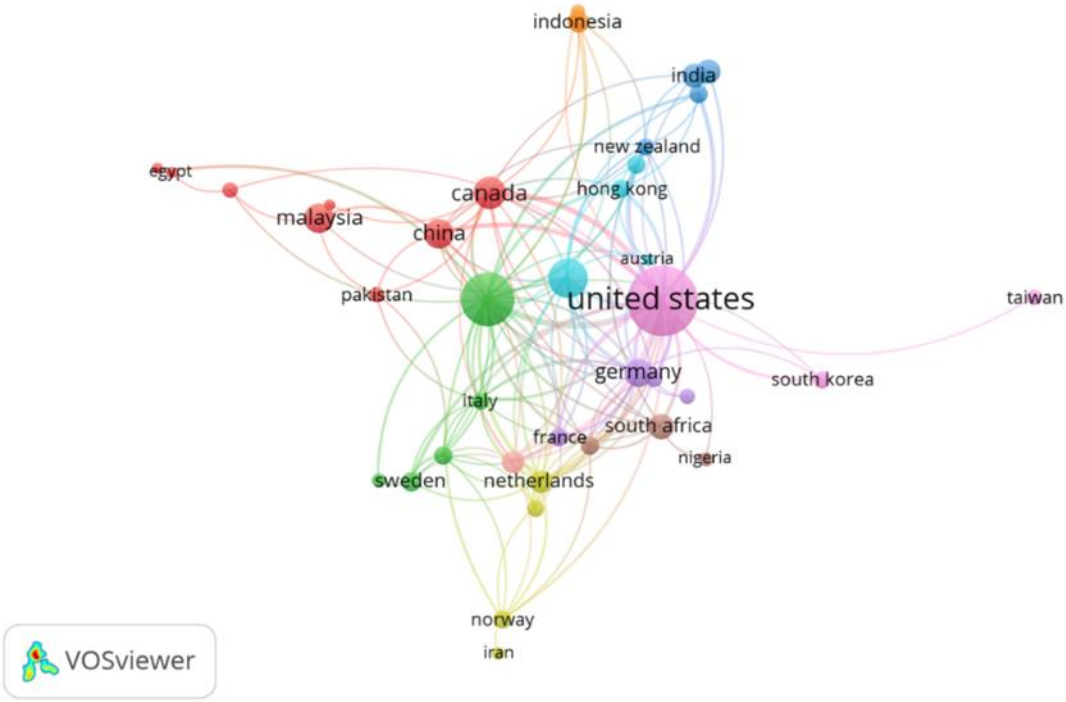


Figure 4 presents a network visualisation map that shows the organisation of citations according to their corresponding nations. According to the authors' connections, they established 10 clusters based on the co-occurrence of nations. The list includes all countries that have contributed to a minimum of 25 publications. The size of a country's node represents the number of articles associated. The initial cluster comprises eight countries: Canada, China, Malaysia, Egypt, Jordan, Pakistan, Saudi Arabia, and the United Arab Emirates. The second cluster comprises five countries: Finland, Greece, Italy, Sweden, and the United Kingdom. The United States, as a prominent nation, is included in cluster nine, with Taiwan and South Korea.

Figure 4. *Network Visualization Map of The Citation by Country*



Note: Smallest quantity of documents of a country = 5; Minimum number of citations of a country = 5

The Greatest Influential Institutions. Table 3 lists the greatest institutions having at least 11 publications on Strategic Leadership in Education. Texas A&M University (16 publications) contributed the most to Strategic Leadership in Education publications out of the 992 documents. The University of Hull, the University of St. Gallen, and Western University placed second, third, and fourth, with 12, 11, and 10 total publications, respectively. The same number of nine publications were shared by two institutions, the University of the West of England and Erasmus Universiteit Rotterdam. Meanwhile, Arizona State University, the University of Houston, and Henley Business School each released eight papers. Lastly, the remaining group published eight articles or fewer.

Table 3. *Most Influential Institutions With At Least Eight Publications*

Affiliation	Country	TP	NCP	TC	C/P	C/CP	*h*	*g*
Texas A&M University	United States	16	16	3057	191.06	191.06	13	16
University of Hull	United Kingdom	12	11	259	21.58	23.55	9	12
University of St. Gallen	Switzerland	11	9	449	40.82	49.89	8	11
Western University	Canada	10	10	1061	106.10	106.10	8	10
University of the West of England	United Kingdom	9	9	40	4.44	4.44	4	5
Erasmus Universiteit Rotterdam	Netherlands	9	9	826	91.78	91.78	8	9
Arizona State University	United States	8	8	1034	129.25	129.25	7	8

University of Houston	United States	8	7	1456	182.00	208.00	6	8
Henley Business School	United Kingdom	8	8	132	16.50	16.50	5	8

Notes: TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; and g=g-index.

The Core Journals. This study also provides the core journal with at least seven journal publications on strategic leadership in education, as shown in Table 4. Elsevier established itself as a leading publisher that continually contributes to strategic leadership in education publications, with 23 publications and 2466 total citations from 1982 to 2022. The Strategic Management Journal was cited as the second most active journal, with 1694 citations. However, the Journal of Management possesses a high CiteScore (CS) ranking, even if it is not in the top ten most frequently cited journals. Elsevier's database included several metrics, such as Source Normalised Impact per Paper (SNIP) and Scimago Journal Rank (SJR), for assessing the quality of scientific research.

Table 4. *Most Active Journal*

Journals	TP	TC	Publisher	Cite Score	SJR 2022	SNIP 2022
Leadership Quarterly	23	2466	Elsevier	15.3	4.331	3.962
Strategic Management Journal	18	1694	Wiley-Blackwell	11.7	8.497	3.571
Long Range Planning	14	905	Elsevier	12.2	2.852	2.562
Journal Of Management	14	2304	SAGE	22.4	7.213	5.718
Sustainability Switzerland	13	130	Multidisciplinary Digital Publishing Institute (MDPI)	5.8	0.664	1.198
Journal Of Business Ethics	10	366	Springer Nature	12.0	2.590	2.976
School Leadership and Management	9	213	Taylor & Francis	6.4	1.379	2.363
Strategy And Leadership	8	83	Emerald Publishing	1.2	0.255	0.185
Journal Of Strategy and Management	8	66	Emerald Publishing	5.2	0.709	1.180
Journal Of Business Research	7	140	Elsevier	16.0	2.895	3.238

Notes: TP=total number of publications; TC=total citations.

The Analysis of Citation. Table 5 presents the citation metrics for the chosen papers as of August 7th, 2023. Over 19 years, from 1982 to 2022, there have been 17,284 citations in education publications under strategic leadership. The citation metric was derived using Harzing's Publish and Perish software, which utilized a RIS-formatted file from the Scopus database to show the raw citation metrics.

Table 5. *Citations Metrics*

Metrics	Data
Papers	900
Citations	17284
Years	19
Cites_Year	909.68
Cites_Paper	19.2
Cites_Author	8554.32
Papers_Author	499.75

Authors_Paper	2.38
h_index	62
g_index	106

The Authorship Analysis. Table 6 displays the top 20 most cited documents in strategic leadership in education. The most cited source, "Strategic Leadership: Theory and Research on Executives, Top Management Teams, and Boards", is a book published in 2009 by Oxford University Press. This book gets 1393 citations, with 99.5 citations per year on average. Finkelstein et al. (2009) were named the most productive author with the most citations on strategic leadership in education.

Table 6. *Top 20 Highly cited documents on Strategic Leadership in Education*

No	Authors	Article Title	Year	Cites	Cites per Year
1	B. Cannella, S. Finkelstein, D.C. Hambrick	Strategic Leadership: Theory and Research on Executives, Top Management Teams, and Boards	2009	1393	99.5
2	J.J.P. Jansen, D. Vera, M. Crossan	Strategic leadership for exploration and exploitation: The moderating role of environmental dynamism	2009	516	36.86
3	G. Yukl	How leaders influence organizational effectiveness	2008	307	20.47
4	D.S. Elenkov, W. Judge, P. Wright	Strategic leadership and executive innovation influence: An international multi-cluster comparative study	2005	305	16.94
5	G. Gavetti	Perspective toward a behavioral theory of strategy	2012	300	27.27
6	R.A. Burgelman, A.S. Grove	Let chaos reign, then rein in chaos - Repeatedly: Managing strategic dynamics for corporate longevity	2007	279	17.44
7	D.S. Elenkov, I.M. Manev	Top management leadership and influence on innovation: The role of sociocultural context	2005	266	14.78
8	A. Boin, P. 't Hart, E. Stern, B. Sundelius	The politics of crisis management: Public leadership under pressure	2016	221	31.57
9	C. Dimmock, A. Walker	Educational leadership: Culture and diversity	2005	191	10.61
10	D.D. Bergh, H. Aguinis, C. Heavey, D.J. Ketchen, B.K. Boyd, P. Su, C.L.L. Lau, H. Joo	Using meta-analytic structural equation modeling to advance strategic management research: Guidelines and an empirical illustration via the strategic leadership-performance relationship	2016	189	27
11	J. Antonakis, R.J. House	Instrumental leadership: Measurement and extension of transformational-transactional leadership theory	2014	182	20.22
12	G.R. Ferris, R. Zinko, R.L. Brouer, M.R. Buckley, M.G. Harvey	Strategic bullying as a supplementary, balanced perspective on destructive leadership	2007	176	11
13	P. Herrmann, S. Nadkarni	Managing strategic change: The duality of CEO personality	2014	167	18.56
14	M. Hernandez, M.B. Eberly, B.J. Avolio, M.D. Johnson	The loci and mechanisms of leadership: Exploring a more comprehensive view of leadership theory	2011	166	13.83

15	L.R. Men, D. Stacks	The Effects of Authentic Leadership on Strategic Internal Communication and Employee-Organization Relationships	2014	163	18.11
16	F. Pettersson	On the issues of digital competence in educational contexts – a review of literature	2018	154	30.8
17	N.J. Foss, S. Lindenberg	Microfoundations for strategy: A goal-framing perspective on the drivers of value creation	2013	151	15.1
18	V. Souitaris, B.M.M. Maestro	Polychronicity in top management teams: The impact on strategic decision processes and performance of new technology ventures	2010	136	10.46
19	R.D. Ireland, M.A. Hitt	Achieving and maintaining strategic competitiveness in the 21st century: The role of trategic leadership	2005	132	7.33
20	J.M. Ahn, T. Minshall, L. Mortara	Understanding the human side of openness: the fit between open innovation modes and CEO characteristics	2017	121	20.17

The Most Productive Authors. Table 7 consists of the most productive authors who contributed significantly to the body of knowledge on Strategic Leadership in Education. Davies, Brent, affiliated with the University of Leeds in the United Kingdom, had the most publications on Strategic Leadership in Education research, with ten publications. Meanwhile, the second-most productive author is Hitt, M.A. from Mays Business School in College Station, Texas. Yet, in total citations, Hitt, M.A. received the most citations, followed by Crossan, M. and Vera, D.

Meanwhile, Davies, B.J. is the author linked with the University of Hull in the United Kingdom and has six publications. Otherwise, the other three authors indicated, Simsek, Z. (Clemson University), O'Regan, N. (Aston Business School), and Leavy, B. (DCU Business School), contributed five total publications. Amongst the productive writers, Crossan, M. from Western University in Canada had the greatest average citations per publication, with a frequency of 360 times. Crossan also had an h-index of 4 and 4 complete publications.

Table 7. *Most Productive Authors With At Least Four Publications*

Author's Name	Affiliation	Country	TP	NCP	TC	C/P	C/CP	*h*	*g*
Davies, Brent	University of Leeds	United Kingdom	10	9	449	44.90	49.89	8	11
Hitt, M.A.	Mays Business School, College Station	United States	9	9	1799	199.89	199.89	8	9
Davies, B.J.	University of Hull	United Kingdom	6	5	116	19.33	23.20	3	6
Simsek, Z.	Clemson University	United States	5	5	173	34.60	34.60	4	5
O'Regan, N.	Aston Business School	United Kingdom	5	5	52	10.40	10.40	3	5
Leavy, B.	DCU Business School	Dublin, Ireland	5	5	43	8.60	8.60	4	5
Vera, D.	University of Houston	United States	4	4	1431	357.75	357.75	4	4
Stockport, G.J.	S P Jain School of Global Management	United Arab Emirates	4	2	2	0.50	1.00	1	1

Palmer, S.	Deakin University	Australia	4	4	74	18.50	18.50	4	4
Holt, D.	Deakin University	Australia	4	4	74	18.50	18.50	4	4
Heavey, C.	University College Dublin	Dublin, Ireland	4	4	281	70.25	70.25	3	4
Ghobadian, A.	Henley Business School	United Kingdom	4	4	37	9.25	9.25	2	4
Georgakakis, D.	University of York	United Kingdom	4	4	284	71.00	71.00	4	4
Crossan, M.	Western University	Canada	4	4	1440	360.00	360.00	4	4
Challis, D.	Challis Consultancy	Australia	4	4	74	18.50	18.50	4	4

Notes: TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; and g=g-index.

The Primary Subject Areas of Strategic Leadership in Education

The third RQ of this study aims to resolve top keywords and co-occurrence analysis. In response to the research question, we used top keyword and co-occurrence analysis to examine the citation networks of 992 articles. This study determines the most frequently applied keyword among strategic leadership in education research to answer RQ3. Table 8 presents the keywords from the 992 strategic leadership in education studies. The most often used keyword in the Strategic Leadership in Education literature was “Strategic Leadership”, which accounted for 24.90%. “Leadership” is the second most frequently used keyword (15.93%). Other keywords that appeared 30 to 60 times included innovation, strategy, and strategic planning.

Table 8. *Top 20 Keywords*

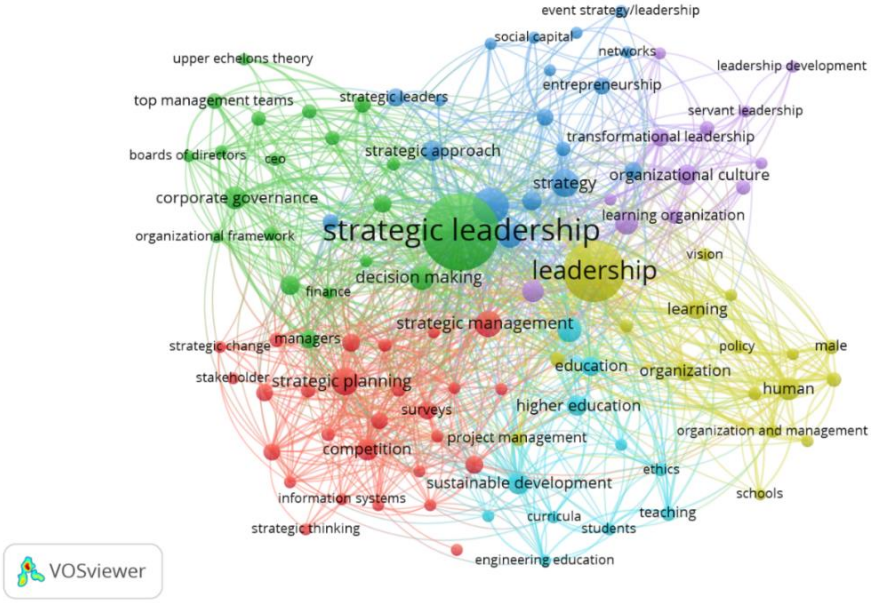
Author Keywords	Total Publications (TP)	Percentage (%)
Strategic Leadership	244	24.60%
Leadership	158	15.93%
Innovation	54	5.44%
Strategy	34	3.43%
Strategic Planning	32	3.23%
Strategic Management	29	2.92%
Sustainability	26	2.62%
Decision Making	25	2.52%
Management	25	2.52%
Human	23	2.32%
Organizational Learning	23	2.32%
Corporate Governance	22	2.22%
Knowledge Management	21	2.12%
Sustainable Development	21	2.12%
Competition	20	2.02%
Higher Education	18	1.81%
Organizational Culture	18	1.81%
Strategic Approach	18	1.81%
Human Resource Management	17	1.71%

Figure 5 shows a network visualisation of the author keywords, each with a minimum of six occurrences. A total of 105 terms out of 2152 were found to meet the specified requirements, and their co-occurrence links were then computed. The keywords were categorised into nine clusters, where the size of each node represents its frequency, and the colour represents its cluster membership. The study examined the robustness of these relationships and

their correlation with other keywords.

The initial cluster, indicated by the red colour, is linked to strategic planning, organisational change, strategic management, strategic thinking, strategic change, top management leaders, top management, and supply chain management. The second cluster, shown in green, comprises the terms related to strategic leadership, upper echelon, CEO, and top management team. The third cluster, highlighted in blue, is linked to concepts such as strategy, strategic leadership, innovation, strategic approach, management, and collaboration. The strategic leadership's largest node was closest to the "leadership" node, and the close distance of both terms indicates a significant link between them.

Figure 5: *Author Keywords Network Visualization Map With At Least Six Occurrences*



DISCUSSION

This study's objective is to provide a thorough bibliometric analysis of the research conducted on strategic leadership in education between 1982 and 2022. Ahmi (2019) states that a bibliometric study was conducted to get insight into the research trends in the subject area. Research organizations can enhance their performance by implementing financial strategies and conducting thorough analyses of scientific research input and output, utilizing bibliometric analysis results for better research. Accordingly, this research gathers data from the Scopus database on publications related to strategic leadership. This analysis revealed 992 documents from the indicated database using the defined search query.

Regarding the first research question (RQ), the analysis of publishing trends in Strategic Leadership in Education revealed that English emerged as the predominant language. The findings suggest that the journal's papers on this subject have consistently expanded and received extensive dissemination. The predominant use of English in Strategic Leadership in Education publications underscores its status as the principal language for scholarly discourse. All scientific fields universally acknowledge English as the prevailing language for communication (Bornmann et al., 2012). This language preference enhances international collaboration and guarantees broader acknowledgement of scientific achievements (Canagarajah, 2022). Addressing the under-representation of various languages in academic writing is essential for encouraging linguistic diversity and guaranteeing equitable knowledge dissemination across cultures.

Examining articles based on their publication year enables the researcher to track the growth and importance of the

research topic across periods (Ahmi et al., 2019). The consistent increase in publications and citations over the decades suggests an expanding community of researchers and practitioners engaged with strategic leadership, highlighting its interdisciplinary applications and growing importance in various sectors. The sharp rise in 2022 could be attributed to post-pandemic shifts in leadership strategies, particularly in adapting to uncertainties and fostering resilience in educational and organizational contexts. This bibliometric analysis provides a comprehensive understanding of the intellectual trajectory of strategic leadership research. This growth trajectory underscores the field's critical role in addressing contemporary educational and organizational challenges, as highlighted in previous bibliometric studies (Ahmi et al., 2019).

In addressing RQ2 of this study, the analysis documented the primary contributors to Strategic Leadership in Education Research and explained their collaborative efforts. The United States has the largest number of contributing writers. Samimi et al. (2020) highlight the US's high international collaboration level, enabling US researchers to significantly contribute to global leadership discourse. Furthermore, leading academic publishers like Elsevier and high-impact journals such as *The Leadership Quarterly* ensure widespread dissemination and citation of U.S.-based research, reinforcing its dominance in the field (Singh et al., 2023). The Research in Education was the most often referenced source in the past five years. The study utilized the VOSviewer program to analyse the citation and co-authorship network, to investigate the specific attributes of scientific partnerships in Strategic Leadership in Education research. Scopus introduced a new scientometric indicator called CiteScore (CS) to track the performance of journals in terms of analysing citations (Zijlstra & Mccullough, 2016). Notably, CS can provide a more authentic understanding of citations compared to the Impact Factor. (Khosravi & Menon, 2019).

The third research question centred on the main subjects of conversation addressed in this study. Keyword co-occurrence analysis is a powerful content analysis technique for determining the degree of association among keywords in the literature (Shmagun et al., 2020). In addition, the author's keywords have been grouped and analysed using VOSviewer (Baker et al., 2020), showing that keyword co-occurrence happens when two appear in the same article, indicating a link between the two areas. Additionally, the terms co-occurrence and co-authorship network mapping have not been verified using various methods. Keyword analysis also provides useful information about the popularity or relevance of a certain area of interest within a study subject. In another context, analysis of the authors, their connection, and the h-index might show their significance in the paper's authorship. (Ahmi et al., 2019). The primary justification for this is that the publications' title, abstract, and keywords are frequently the only elements included in most research on a specific subject. Consequently, it is imperative to implement a thorough procedure.

Implications and Future Directions

Research on strategic leadership has shown significant growth in recent years, as well as during an extended period. The United States, the United Kingdom, and Australia are at the forefront of strategic leadership research, whereas Malaysia and China dominate research in Asia. The investigation-related strategic leadership in research is limited to particular nations and lacks comprehensiveness. Moreover, it is imperative that future research on strategic leadership, it is imperative to establish more aggressive international collaborations that may effectively foster a broader range of geographical and cultural variety (Hallinger & Kovačević, 2019). This collaboration is essential for doing comprehensive research on Strategic Leadership in Education, particularly at the school level, considering into perspective various contexts.

Furthermore, Strategic leadership programs should emphasize action research and policy creation so that future leaders can close the gap between policymaking and scholarly research. Universities should create leadership think tanks working with government departments to create evidence-based policy. Policymakers can also use leadership research results in national education plans to improve policy responsiveness and effectiveness.

Involving a greater spectrum of research on strategic leadership depends on growing research databases. Future studies might combine databases such as Web of Science, Google Scholar, and ERIC to increase the depth and

trustworthiness of the results. However, the timeline for our analysis remained the same. This study aligns with UNESCO's Sustainable Development Goal 4 (SDG 4), underscoring the need for evidence-based policymaking and leadership development to ensure inclusive and equitable education (UNESCO, 2023). Similarly, the OECD highlights the importance of data-driven decision-making in educational leadership, advocating for research that informs policy improvements in school governance and leadership effectiveness (OECD, 2021).

Limitations

Despite the distinctive attributes of bibliometric analysis, it is important to acknowledge the study's limits to provide readers with a clear understanding. Scopus has been selected as the recommended database for this review because it offers a range of scholarly papers than the Web of Science. It is important to mention that most periodicals listed in Scopus consist of articles published in English. This constrains the compilation of comprehensive literature on strategic leadership. Furthermore, the nature of strategic leadership in schools should also be considered. Strategic leadership is a concept understood and interpreted in many ways by different individuals, ranging from teacher leaders to renowned professionals. Nevertheless, this evaluation has further enhanced the investigation that explicitly addressed strategic leadership, including definitions that pertain to the execution of these strategic leadership duties.

CONCLUSIONS

Finally, the researchers described the knowledge base of the main well-being literature using bibliometric approaches. The bibliometric study of strategic leadership trends in education reveals the changing environment and important topics influencing educational leadership. These findings highlight the need to keep up with evolving trends and utilise strategic leadership methods to promote good change and success in educational institutions. Therefore, it is advised to consider the following proposal for future studies: (i) utilise techniques like bibliographic coupling and fractional counting for accurate analysis, (ii) Duplicate study using alternative databases for better representation, and (iii) Engage in research to reduce educational disparity through Strategic Leadership in Education. This will enhance the attainment of educational goals on a worldwide scale among educators specialising in Strategic Leadership in Education.

CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

REFERENCES

Adobor, H., Darbi, W. P. K., & Damoah, O. B. O. (2021). Strategy in the era of "swans": The role of strategic leadership under uncertainty and unpredictability. *Journal of Strategy and Management*. https://doi.org/10.1108/JSMA-09-2020-0242

Ahmi, A., Herry, M., Nasir, M., & Intan, T. P. (2019). Examining the trend of the research on eXtensible Business Reporting Language (XBRL): A bibliometric review. *International Journal of Innovation, Creativity and Change, 5*(2), 1145-1167.

Awodiji, O. A., Uleanya, C., & Naicker, S. R. (2023). School leadership development for sustainability in the post-digital era. *SFU Educational Review, 15*(1). https://doi.org/10.21810/sfuer.v15i1.6146

Baker, H. K., Pandey, N., Kumar, S., & Haldar, A. (2020). A bibliometric analysis of board diversity: Current status, development, and future research directions. *Journal of Business Research, 108*(August 2019), 232–246. https://doi.org/10.1016/j.jbusres.2019.11.025

Bolman, L. G., & Deal, T. E. (2017). *Reframing organizations*. Wiley. https://doi.org/https://10.1002/9781119281856

Bornmann, L., Marx, W., Gasparyan, A. Y., & Kitas, G. D. (2012). Diversity, value and limitations of the journal impact factor and alternative metrics. *Rheumatology International, 32*(7), 1861–1867. https://doi.org/10.1007/s00296-011-2276-1

Bush, T. (2021). Assessing successful school leadership: What do we know? *Educational Management Administration & Leadership, 49*(5), 687–689. https://doi.org/10.1177/17411432211034675

Bush, T. (2023). School leadership during the pandemic: Managing a global crisis. *Educational Management Administration & Leadership, 51*(5), 1011–1013. https://doi.org/10.1177/17411432231186129

Canagarajah, S. (2022). Language diversity in academic writing: Toward decolonizing scholarly publishing. *Journal of Multicultural Discourses, 17*(2), 107–128. https://doi.org/10.1080/17447143.2022.2063873

Dacholfany, M. I., Ritonga, M., Hiljati, H., Judijanto, L., & Syamsuri, S. (2024). navigating educational management in the era of digital transformation. *AL-ISHLAH: Jurnal Pendidikan, 16*(2). https://doi.org/10.35445/alishlah.v16i2.4769

Davies, B., & Davies, B. J. (2010). Developing a strategic leadership perspective. In *Developing Successful Leadership* (pp. 11–25). Springer Netherlands. https://doi.org/10.1007/978-90-481-9106-2_2

Dong, J., Zhao, Y., & Buckingham, L. (2024). Thirty years of writing assessment: A bibliometric analysis of research trends and future directions. *Assessing Writing, 61*, 100862. https://doi.org/10.1016/j.asw.2024.100862

Drucker, P. F. (2017). *The effective executive: The definitive guide to getting the right things done*. HarperCollins.

Elżbieta Rak-Młynarska. (2022). Analysis of trends in the development of the educational environment: Education of the future. *Futurity Education*, 4–13. https://doi.org/10.57125/FED/2022.10.11.24

Gaviria-Marin, M., Merigó, J. M., & Baier-Fuentes, H. (2019). Knowledge management: A global examination based on bibliometric analysis. *Technological Forecasting and Social Change*, 140, 194–220. https://doi.org/10.1016/j.techfore.2018.07.006

Grishnova, O., & Panchenko, O. (2022). Organizational culture in the system of social responsibility of high education institutions. *Problems and Prospects of Economics and Management, 4*(32), 9–16. https://doi.org/10.25140/2411-5215-2022-4(32)-9-16

Hallinger, P., & Kovačević, J. (2019). A bibliometric review of research on educational administration: Science mapping the literature, 1960 to 2018. In *Review of Educational Research* (Vol. 89, Issue 3, pp. 335–369). SAGE. 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* (4th Ed.) (pp. 546–556). Elsevier. https://doi.org/10.1016/B978-0-12-818630-5.05070-3

Kamarrudin, H., Talib, O., Kamarudin, N., Ismail, N., & Zamin, A. A. M. (2022). Examining the trend of research on active engagement in science education: Bibliometric analysis. *Journal of Turkish Science Education, 19*(3), 937–957. https://doi.org/10.36681/tused.2022.157

Khosravi, M. R., & Menon, V. G. (2019). *CiteScore-based quartiles for scientometric analysis.* December.

Kraus, S., Breier, M., & Dasí-Rodríguez, S. (2020). The art of crafting a systematic literature review in entrepreneurship research. *International Entrepreneurship and Management Journal, 16*(3), 1023–1042. https://doi.org/10.1007/s11365-020-00635-4

Leithwood, K., Jantzi, D., & Steinbach, R. (2021). Leadership and other conditions which foster organizational learning in schools. In *Organizational Learning in Schools* (pp. 67–90). Taylor & Francis. https://doi.org/10.1201/9781003077459-5

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., Altman, D., Antes, G., Atkins, D., Barbour, V., Barrowman, N., Berlin, J. A., Clark, J., Clarke, M., Cook, D., D'Amico, R., Deeks, J. J., Devereaux, P. J., Dickersin, K., Egger, M., Ernst, E., … Tugwell, P. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Medicine, 6*(7). https://doi.org/10.1371/journal.pmed.1000097

Nisar, N., Quraishi, U., & Khanam, A. (2019). The impact of new-genre leadership style training on leadership skills of school leaders. *Global Regional Review, IV*(II), 134–144. https://doi.org/10.31703/grr.2019(IV-II).15

Nur Diyana Zakariah, Muhammad Faizal A. Ghani, & Norfariza Mohd Radzi. (2023). Strategic leadership in Malaysia education: A systematic literature reviews. *Jurnal Akuntabilitas Manajemen Pendidikan, 11*(2), 1–9. https://doi.org/https://doi.org/10.21831/jamp.v11i2.60524

O'Connor Jr., J. R. (2017). Strategic Leadership in PK – 12 Settings. In *Encyclopedia of Strategic Leadership and Management* (pp. 1585–1598). IGI Global. https://doi.org/http://dx.doi.org/10.4018/978-1-5225-1049-9.ch110

Passas, I. (2024). Bibliometric analysis: The main steps. *Encyclopedia, 4*(2), 1014–1025. https://doi.org/10.3390/encyclopedia4020065

Punj, N., Ahmi, A., Tanwar, A., & Abdul Rahim, S. (2023). Mapping the field of green manufacturing: A bibliometric review of the literature and research frontiers. *Journal of Cleaner Production, 423*, 138729. https://doi.org/10.1016/j.jclepro.2023.138729

Ramos, R., Rita, P., & Moro, S. (2024). Exploring the intersections of Tourism and Hospitality: A review and research agenda. *Tourism & Management Studies, 20*(4), 27–45. https://doi.org/10.18089/tms.20240403

Samimi, M., Cortes, A. F., Anderson, M. H., & Herrmann, P. (2020). What is strategic leadership? Developing a framework for future research. *Leadership Quarterly, November*, 101353. https://doi.org/10.1016/j.leaqua.2019.101353

Shin, N., & Park, S. (2021). Supply chain leadership driven strategic resilience capabilities management: A leader-member exchange perspective. *Journal of Business Research, 122*, 1–13. https://doi.org/10.1016/j.jbusres.2020.08.056

Shmagun, H., Oppenheim, C., Shim, J., & Kim, J. (2020). The Uptake of open science: Mapping the results of a systematic literature review. *ITM Web of Conferences, 33*, 01001. https://doi.org/10.1051/itmconf/20203301001

Spain, E., & Woodruff, T. (2022). The applied strategic leadership process: Setting direction in a VUCA World. *Journal of Character and Leadership Development, 10*(1), 47–57. https://doi.org/10.58315/jcld.v10.250

Sweileh, W. M., Wickramage, K., Pottie, K., Hui, C., Roberts, B., Sawalha, A. F., & Zyoud, S. H. (2018). Bibliometric analysis of global migration health research in peer-reviewed literature (2000–2016). *BMC Public Health, 18*(1), 777. https://doi.org/10.1186/s12889-018-5689-x

Tan, C. Y., Dimmock, C., & Walker, A. (2024). How school leadership practices relate to student outcomes: Insights from a three-level meta-analysis. *Educational Management Administration & Leadership, 52*(1), 6–27. https://doi.org/10.1177/17411432211061445

van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics, 84*(2), 523–538. https://doi.org/10.1007/s11192-009-0146-3

Zakaria, R., Ahmi, A., Ahmad, A. H., & Othman, Z. (2021). Worldwide melatonin research: A bibliometric analysis of the published literature between 2015 and 2019. *Chronobiology International, 38*(1), 27–37. https://doi.org/10.1080/07420528.2020.1838534