



Bibliometric Analysis of the 2019-2023 Leadership Mapping of Indonesia's Chief Schools

Cerli Hutagalung¹, Heru Santo², Teguh Trianung Djoko Susanto³

Postgraduate, Universitas Negeri Jakarta, Indonesia

Correspondence: cerlygalung065@gmail.com

ABSTRACT

The leadership difficulties faced by school principals are becoming more complicated in the context of globalization and the fourth industrial revolution. In addition to managerial skills, transformative leadership, digital leadership, and learning leadership are also desired qualities for principals. As such, examining the leadership styles of today's principals in schools is crucial. The opportunities and difficulties experienced by school principals can be summarized in this report, along with trends in principled leadership. Newness: Using bibliometric analysis as support, this study will examine the most recent research themes from 2019 to 2023. Approaches to Research: On January 2, 2024, Google Scholar was used to conduct the search. Specifically in Indonesian abstracts, keywords, and title search terms, the phrase "principal leadership"

Keywords:

Principal leadership;
Bibliometrics;
Performance.

INTRODUCTION

The effectiveness of a school can be determined by looking at its leadership, since the principle has a big say in how the school is managed, how professional learning communities are formed, and how well students do. The requirements of school principals have increased in the fast-paced modern Indonesia of constantly evolving economies, swiftly growing technologies, and rapidly altering educational policies. To properly traverse these hurdles, a detailed understanding of effective principal leadership approaches tailored to the specifics of Indonesian education is required. In order to improve educational outcomes, the job of school principals in Indonesia is becoming more and more important (Sultoni & Amirul Adha, 2020) The literature study makes it clear that school leadership strategies are important in determining how effective schools are overall and how to raise student achievement. Many studies emphasize the significance of the principal as an educational leader who has to identify, address, and resolve inadequacies inside the school (Hanafiah et al., 2023).

Many studies show that the main leader in school reform is the principal. Yokota, 2020, school leadership has been shown to have a quantitative, beneficial, and significant impact on student learning, even if only a small part. The majority of studies offer empirical evidence supporting the importance of school leadership, but there are differences in how the leadership construct is assessed and how leadership actions affect it.

A leader who employs a style of leadership is supposed to impact their subordinates' behavior and enhance their output. (Lumban Gaol, 2023) Different types of leadership, including authoritarian, democratic, and laissez-faire, might be used by the head of the school. A leadership style that revolves around the head of the school is called authoritarian leadership. In this leadership style, the leader has complete





authority to decide and manage his staff. A participative leadership style, democratic leadership entails the head of school including his subordinates in decision-making. Giving a subordinate the flexibility to make decisions is known as laissez-faire leadership.

The head of the school is crucial in developing policies, especially those pertaining to crisis management, so that learning can go on in the event of an emergency or crisis. According to his study's findings (Ali & Hasanah, 2021), the head of school's leadership can effectively raise the caliber of teachers at Muhammadiyah High School 3 in Yogyakarta. Three head-of-school policies have been shown to be effective in raising teacher performance, which indirectly ensures high-quality instruction for students receiving distance learning.

The results of the research conducted (Minsih et al., 2019) can be described as follows: in MIM, PK Kartasura has a role in its leadership. There are two important things: the head of the school as the educational administrator and the supervisor of education. The strong character of a leader will have a positive influence on the style and success of his leadership. Therefore, in determining the type and character of the leader, they must be observed and well organized. On the other hand, in the Regulations of the Minister of Education, Culture, Research, and Technology of the Republic of Indonesia No. 40 Year (Peraturan Menteri Pendidikan, 2021) concerning the appointment of teachers as Head of School, Chapter II Article 2 (1) (c) states that a head of school must have a teacher's certificate. It can be understood that the head of the school must be able to cooperate with the teachers, parents of students, and other policymakers.

Continuous Improvement Learning is one of the keys to effective leadership. Seizing professional development opportunities and keeping up with best practices and new research Creating Partnerships: Encouraging robust partnerships with stakeholders in order to make use of resources and knowledge (Mazurkiewicz, 2021). Empowering Others: Fostering a shared leadership culture that encourages employees, particularly teachers, to accept responsibility for their jobs. Data-Informed Decision Making: Applying data to inform curriculum creation, resource allocation, and strategic planning. Self-Reflection and Adaptability: Acknowledging the necessity of ongoing education and development, adjusting to new situations, and exhibiting fortitude in the face of difficulties.

Schools, teachers, and pupils can improve educational standards with the help of the head of the school. The leadership of the head school concerns the ethical situation and adapts to the challenges faced by its subordinates, employees, and organizations or companies (Akins et al., 2020) Leadership is not the only way to build a long-lasting organizational culture. However, research will be required according to the extent to which research on head school leadership has developed and been used well in management.

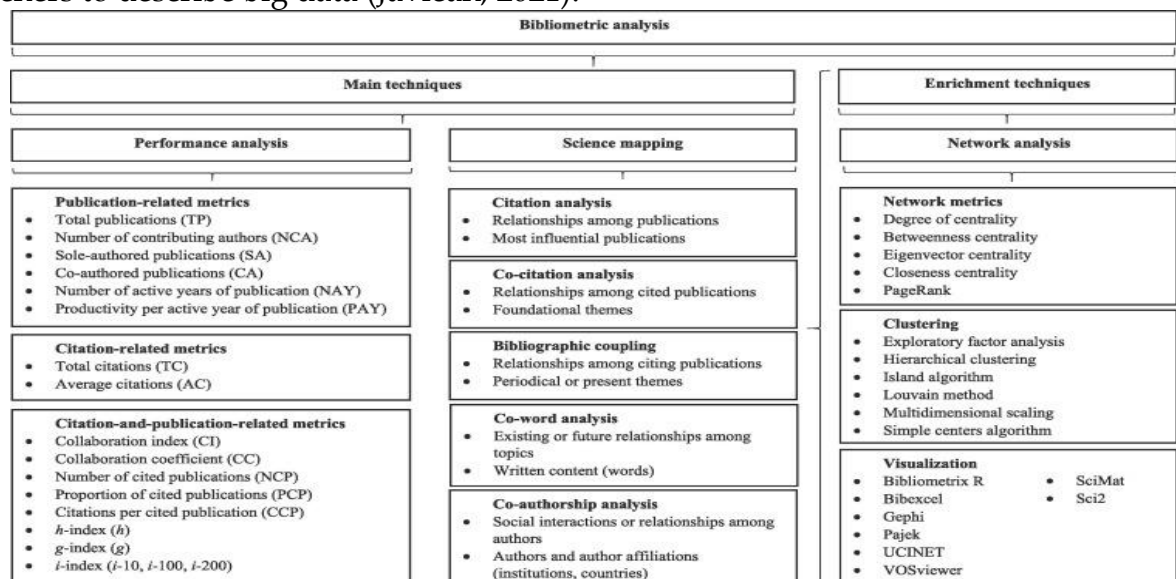
As a result, we're interested in research related to the head of school leadership. This research is a first step in looking at existing research and finding research themes related to how leadership and mastering information technology affect the quality of teacher service. The focus of this research consists of several questions: how has the



latest research impacted the leadership of the head of school over the last five years? Who's the author of this research? What are the main keywords in this research? Finally, by finding answers to these questions, we can start further research into the leadership of the head of school and ongoing research topics.

METHOD

We reviewed literature related to the head of school leadership and used bibliometric methods to answer research questions. The Google Scholar database is used to obtain bibliometric data sources. Vos viewer is used for data mapping (Xie, 2020). Data mapping results will be checked and compared with data from other journals. Bibliometric analysis helps to compile and map scientific research with a given theme. In addition, bibliometrics can help researchers find differences in previous research subjects. Data journals take a long time to be presented manually, and bibliometric analysis aims to provide a broad overview of a particular topic, show relationships between published journals, and generate ideas for further research (Janik, 2020). Performance analysis is available in multiple sizes. The most common metric is the annual number of publications and quotes per research constituent, where quotes represent impact and influence and publications serve as a stand-in for productivity. The performance of research constituents is measured using additional metrics like quotas per publication and h-index, which integrate quotes and publications. Even though the analysis is descriptive, it recognizes the significance of several components of the research topic (Donthu, 2021) found that bibliometric analysis made it easier for researchers to describe big data (Javlean, 2021).



source : <https://ars.els-cdn.com/content/image/1-s2.0-S0148296321003155-gr2.jpg>

The methods for bibliometric analysis fall into two categories: science mapping and performance analysis. Essentially, scientific mapping focuses on the connections between research constituents, while performance analysis considers the contributions of individual research elements. The methods for science mapping and performance analysis, which are depicted in Fig. 1, are explained in the following subsection.



The search was done through the Google Scholar database on January 3, 2023. "School leader" is written as a search term in all titles, abstracts, and keywords. The year 2019–2023 is used as a filter. The filter is used for five years to ensure that the subject remains relevant to the published document. (Cucciniello et al., 2017). The search results showed that the subject of the analysis was 200 published articles. This can be seen in the Table 1 Citation metrics.

Table 1. Citation Metrics

Publication years	2019-2023
Gtation years	5 (2019-2024)
Papers	200
Citations	1483
Citis/Year	296.60
Authors/paper	2.41
h-Index	19
g-Index	34
hI,norm	14
hI, annual	2.80
hI, index	10

The 200 articles obtained from Google Scholar are then processed using Vos Viwer. On the processing, researchers limit themselves to 10 keywords that often appear, and then the results appear as shown in Table 2. Table 2 shows the keywords of the 200 articles and the level of interrelationship between articles. The keywords that have the highest three levels of relevance are: leaders (accuracy = 70 and relevance = 2.20); head of school leadership (accuracy = 34 and relevancy); and leadership style (accuracy = 13 and relevance = 1.19).

Table 2. Verify Selected Terms

Selected	Term	Occurrences	Relevance
V	Leader	70	2.20
V	Principal leadership	34	1.23
V	Leadership style	13	1.19
V	Principal	49	1.07
V	Leadership	51	0.92
V	Performance	28	0.81
V	Headmaster	35	0.75
V	teacher	35	0.67
V	School principal	18	0.63
V	role	19	0.52

RESULTS AND DISCUSSION

The search results for the last five years (2019-2023) about the leadership of the head of school using Google Scholar have seen a very significant increase from 2022 to 2023 of 31 articles. whereas the supporting keyword and the results of the research will be presented in Table 3.

**Table 3.** Variables And The Results Of The Research

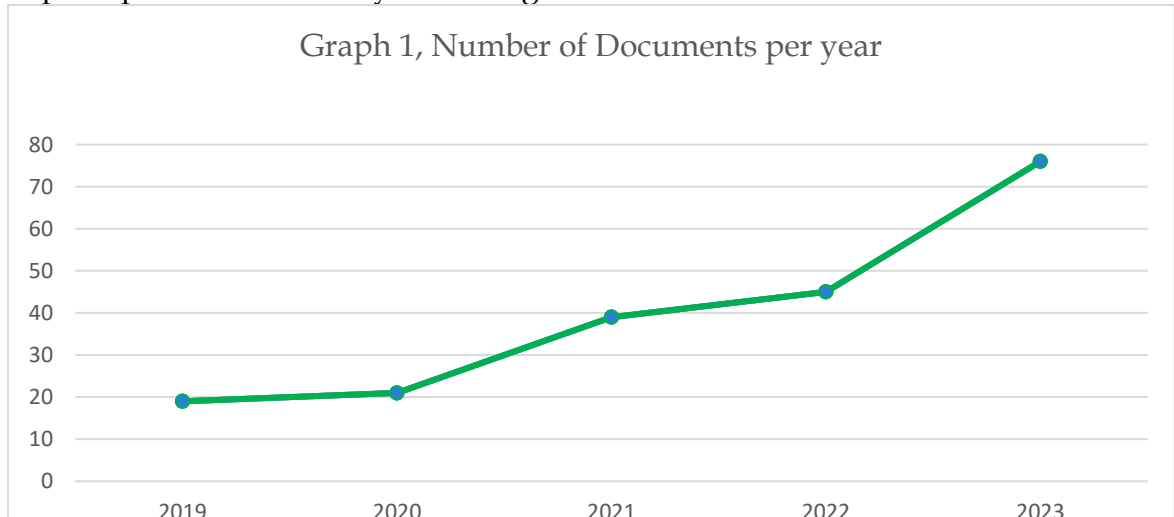
Research title	keyword	results
The influence of the motivation and leadership style of the head of school on the performance of teachers in the state secondary school, Tanjung Balai (Penelitian et al., 2021).	Influence; Motivation; Leadership Style; Principal; Teacher Performance	Simple regression testing between leadership styles (X2) has a positive influence on teacher performance (Y), with a contribution of 58.4%. The positive influence shows that the better the leadership (X2), the better the teacher's performance (Y).
The influence of the head of school leadership and teacher professional improvement on the performance of teachers in the COVID-19 era (Russamsi et al., 2020)	Leadership Of Headmaster, professional improvement of teachers, Teacher Performance	With a level of influence of 52.1%, the results demonstrated that the professional teachers and the principal's leadership had a significant impact on the teachers' performance at SD Asy-Syifa 2 Bandung. Other factors determined the remaining 47.9% of the performance.
The Impact of Instructor Discipline and School Leader Leadership on Teacher Effectiveness	Head of school leadership, teacher discipline, teacher performance.	The results of this study show that: 1) there is a very significant positive influence between the leadership style of the head of the school and the performance of the teacher, as shown by the simple regression line equation = $138.57 + 1.65X_1$.
The Leadership Role of the Head of School in Improving the Quality of Education Through School-Based Management (Kepemimpinan et al., 2020)	Role of Leadership; Education Quality; School-Based Management	The results of the study concluded that the principal had carried out his main role as a leader and manager well, in addition to his other roles; he was a tough entrepreneur in an effort to improve the quality of education.
The Principal's Leadership Function in Enhancing Student Quality in the Martapuro SDN 2 District of Pasuruan (Janik, 2020).	Leadership, Principals, Students	The findings demonstrate that the principal plays the roles of manager, innovator, and motivator by implementing various initiatives to raise the caliber of students at SDN Martapuro 2. These initiatives include attempting to actualize the school's vision and mission, achieving active, effective, and efficient learning, igniting students' interest and motivation in their studies, and attempting to uphold the moral principles and character of the students.

Table 3 shows that both types of qualitative and quantitative research have been used to assess the head-of-school aspiration variables. The professionalism of teachers, the quality of teaching services, and the level of education have also been studied. Overall, the five articles on the leadership of the head of school show that the variables studied have been enhanced by good leadership styles, leadership responsibilities, and leadership strategies.





In graph 1, the head of school's five-year leadership research is presented. (2020–2023). Most published documents in 2019 were 19 pages or less. 2021 will see 21 units of it. The published number was 39 in 2021, a slight increase. Twenty-five documents were published in 2023. Nevertheless, there has been a noticeable uptick by 2023, with 76 publications published in total. Thus, 40 publications about leadership are produced annually on average.



Looking table 4, in table 4 arranges the five names in order of highest quotation. Elazhari's articles include the most quotes – 115 – while Jewish literature has the fewest quotations. But when it comes to link strength, Russamsi receives a value of five, and Yahdiyari receives a score of twelve. Hence, there hasn't always been a strong relationship with the top circumstance.

Table 4. Authors And Writing Citation

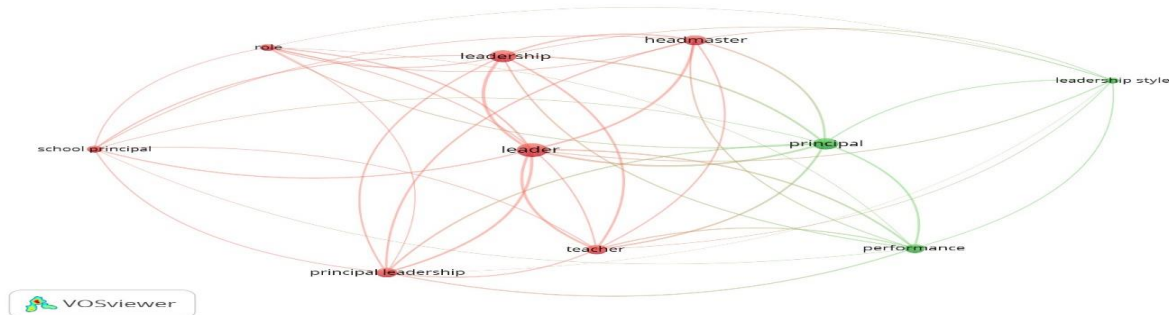
Author	Documents	Citation	Total Link Strength
E Elazhari, K Tampubolon, B Barham	Science Journal	115	2
Y Russamsi, H Hadian, a Nurlaeli	Indonesian Journal of Educational Management	96	5
E Juniarti, N Ahyani, A Ardiansyah	Journal of Education Reseach	95	1
E Kurniawati, Y Arafat, Y Puspita	Journal of Education Research	77	3
NR Yahdiyani, AR Muna	https://ummaspul.e-journal.id/Edupsyscouns/issue/view/9	64	12

In graph 3, maps are displayed using VOS viewer mapping and keywords. Cluster duets, set apart by the colors red and green, are visible in the network visualization graph above. This information is the result of a calculation made by the VOS viewer with a minimum of five events. Out of the 639 things that I found in the search, 10 of them had repeated words. When grouping, common terms are disregarded. Nodes provide an additional way to view cluster connectivity. A higher frequency corresponds with a larger node. The keyword that appears is in two clusters. Cluster 1 (7 items): headmaster, leader, leadership, principal leadership, role,



school principal, and teacher. And then Cluster 2 (3 items): leadership style, performance, and principal (look at the graph 2).

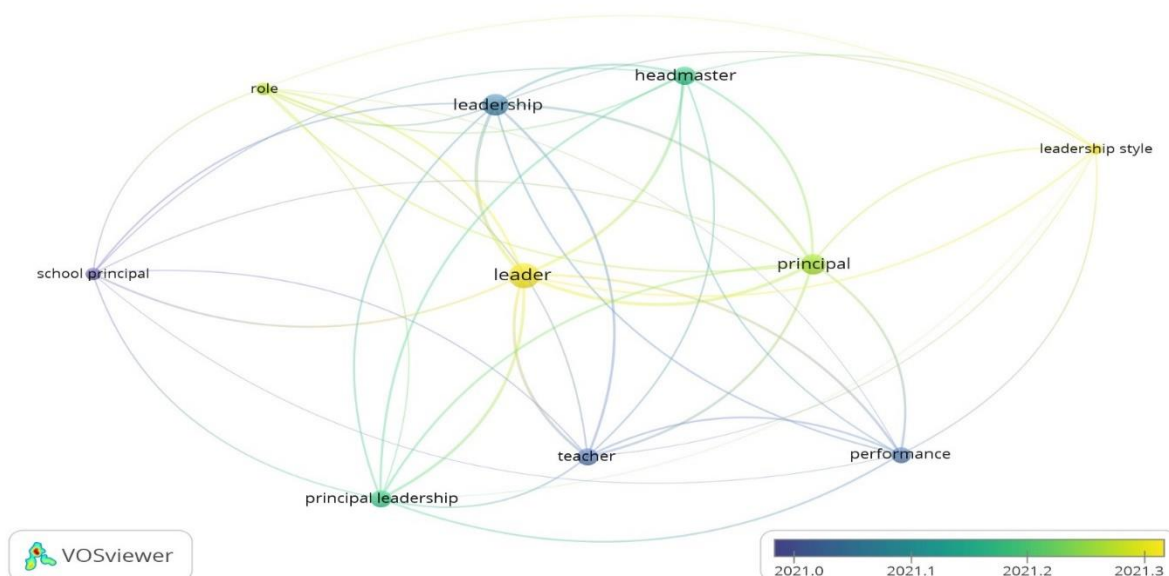
Graph 2. Network Visualization



How the ten keyword positions have been defined in research over the last five years is shown in Graph 3. Relationships between keywords are shown in Vos Viewer data. Old blue-coded keywords, such as leadership, teachers, and performance, have been researched frequently, but younger and brighter keyword codes, like leadership styles, roles, and leadership, are still likely to be researched.

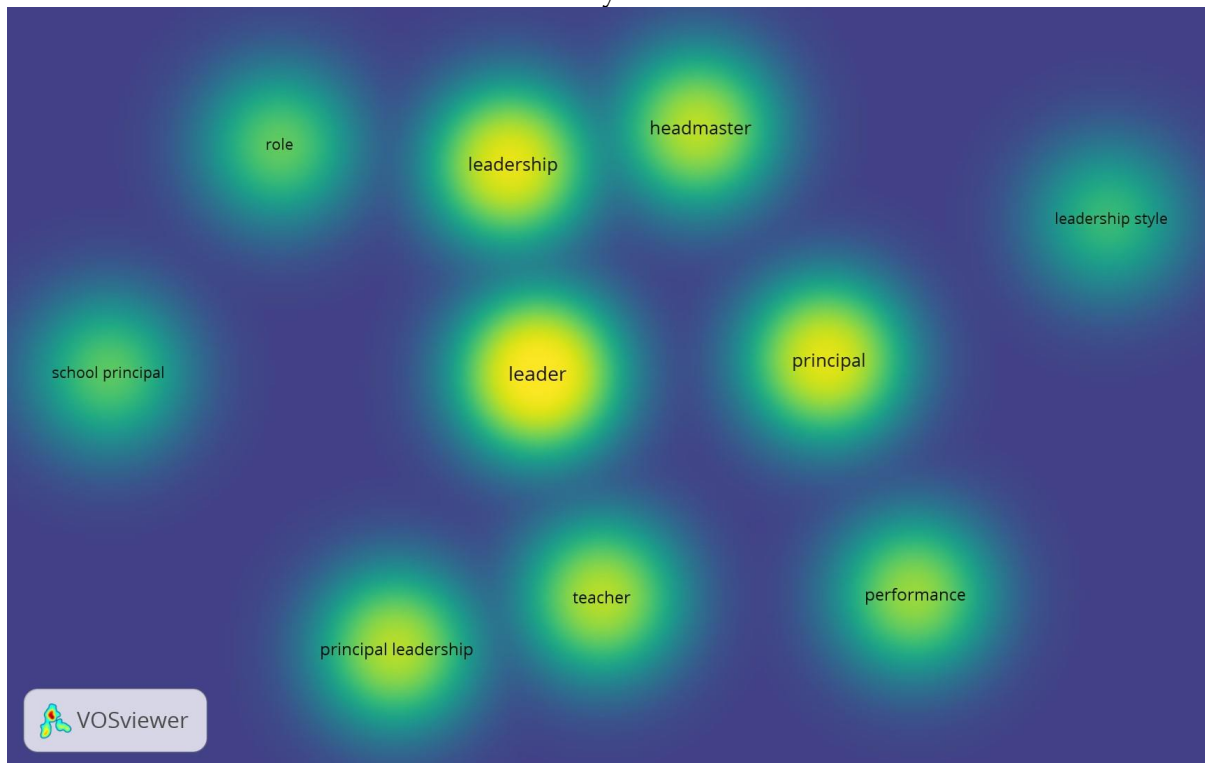
According to Yokota, knowledge of the various roles that Japanese policymakers are expected to play and how these expectations have evolved over time requires examining legislation and policy documents through the lenses of distributed, transformative, transactional, and instructional leadership styles. Given that this leadership style has its roots in Western nations, it is also important to classify legal clauses, policy documents, social and political contexts, and situations where this style of leadership drew the interest of Japanese policymakers. Finally, the discussion section should highlight any notable distinctions between these styles. Through Vos viewer analysis, the keywords required to look into the head of school's leadership style became apparent. It is consistent with research.

Graph 3. Keyword Network Visualization Data





Graf 4. Density Visualization



Graph 4 shows a color differential map resulting from a keyword depth mapping analysis. A new study shows that colorful and bright keywords are the most important. The word "leadership" is big and bright yellow because it's the main keyword. At work, the yellow words about leadership and spirituality – which are usually blue – indicate that they have recently become an interest to write about; the green and blue words indicate that these words are still rarely used in articles. For example, "leadership style," "role," "school principal," and "small letters" suggest that, over the past five years, not much research has been done on these terms.

CONCLUSION

Based on research comparisons on head school leadership, the average number of leadership publications published during the last five years (2019–2023) was 41 papers per year (Gardner et al., 2020). The head of school's leadership is the study's focus. It is consistent with scope data, which indicates that the head of school paper typically appears annually. It is fueled by shifts and advancements in the field of education, mostly as a result of technical and international economic advancements. It impacts the function of leadership as a whole. Nonetheless, the focus of this publication is on the duties and leadership of the head of school.

A bibliometric analysis of the number of quotes can open up new spaces for research. Elazhari, Russamsi, Juniarti, Kurniawati, and Yahdiyani are the five authors with the highest number of Google Scholar quotes, according to table 4. Graphs 2 and 3 show that the words correlate with each other. Recent studies may take other authors like Javlean. Although Javlean has the largest number of authors, other writers have



not quoted much of him for five years. Javack's theme may have been much studied by other writers. Seeing the Javlean writing theme in the Scopus database is often the theme of Hunker leadership and spiritual leadership in employee relationships. Besides, graph 4 shows that the SL theme with employees is still a little bit.

Keywords that are often found in documents are identified through network analysis. Looking at the fourth, five-year chief school research chart deals with themes such as organizational commitment, employee performance, job satisfaction, and school citizen behavior. Further research can be based on the fifth chart by looking at keywords in the dark areas, which cover themes like vision, job contentment, employee performance, organizational citizenship behavior, and hard work. This suggests that senior leadership research on topics is still evolving, so further research can add related research. Further research can look for topics that have not emerged in the past 5 years, such as senior management leadership types and roles.

This study of literature only looks at the practice of education leaders in Indonesia. Therefore, research into the way education leaders in Indonesia practice this style of leadership will have real consequences for policymakers and education leaders. Furthermore, the study does not provide a complete picture of how chief teachers, deputy chiefs, and other middle leaders help manage schools. The current literature will be enriched with in-depth explanations of how policymakers train these middle-class leaders as future leaders. However, this paper opens up a new opportunity to understand how leadership has been shaped by national policy by interpreting laws and policy documents in K-12 education from the perspective of distributed, transformative, and transactional leadership styles. Additional research. Finally, various research techniques can be used to expand this research. For example, future research could look at the existing styles of leadership and rules described in Graph 3 and apply them to the laws and policy documents of other countries. This method will provide an additional understanding of how this style has been adapted or modified in each country according to its cultural and social context. As a result, this method can serve as an important analytical tool in the growing field of education administration.

REFERENCE

- Akins, C. ; Gutierrez De Blume, A. ; Cleveland, R. ; & Pannell, S. (2020). Instructional Leadership Practices and School Leaders' Self-Efficacy. In *School Leadership Review* (Vol. 4785659, Issue 1).
- Ali, S., & Hasanah, E. (2021). Kepemimpinan Kepala Sekolah dalam Menjamin Mutu Pendidikan Pada Masa Pandemi Covid-19 di SMA Muhammadiyah 3 Yogyakarta. *Jurnal Ilmiah Mandala Education*, 7(1), 264-272. <https://doi.org/10.36312/jime.v7i1.1735>
- Donthu, N. ; K. S. ; M. D. ; P. N. ; L. W.-M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *J. Bus. Res*, 133, 285-296.
- Hanafiah, Firman, M., & Gunawan, U. (2023). Leadership Of School Principle In Developing Education Management Standards At Mts Yaspida Sukabumi.





- Indonesian Journal of Educational Development (IJED)*, 4(2), 259–265.
<https://doi.org/10.59672/ijed.v4i2.2973>
- Janik, A. ; R. A. ; S. M. (2020). Scientific Landscape of Smart and Sustainable Cities Literature: A Bibliometric Analysis. *Sustainability*, 12, 779.
- Javlean, C. (2021). Mapping Spiritual Leadership in Today's Organizations: Bibliometrics Analysis 2017-2021. *Journal of Leadership in Organizations (JLO)*, 1–4.
- Kepemimpinan, P., Sekolah, K., Meningkatkan, D., Pendidikan, M., Manajemen, M., Sekolah, B., Kurniawati, E., Arafat, Y., & Puspita, Y. (2020). Peran Kepemimpinan Kepala Sekolah dalam Meningkatkan Mutu Pendidikan melalui Manajemen Berbasis Sekolah. In *Journal of Education Research* (Vol. 1, Issue 2).
- Lumban Gaol, N. T. (2023). School leadership in Indonesia: A systematic literature review. In *Educational Management Administration and Leadership* (Vol. 51, Issue 4, pp. 831–848). SAGE Publications Ltd.
<https://doi.org/10.1177/17411432211010811>
- Mazurkiewicz, G. (2021). Educational leadership in times of crisis. *Risks*, 9(5).
<https://doi.org/10.3390/risks9050090>
- Minsih, M., Rusnilawati, R., & Mujahid, I. (2019). Kepemimpinan Kepala Sekolah Dalam Membangun Sekolah Berkualitas Di Sekolah Dasar. *Profesi Pendidikan Dasar*, 1(1), 29–40. <https://doi.org/10.23917/ppd.v1i1.8467>
- Penelitian, J., Motivasi dan Gaya Kepemimpinan Kepala Sekolah Terhadap Kinerja Guru di SMP Negeri, P., Balai, T., Tampubolon, K., Yanti Parinduri, R., & Author, C. (2021). All Fields of Science J-LAS The Influence of Principal's Motivation and Leadership Style on Teacher Performance at SMP Negeri 2 Tanjung Balai. *AFoSJ-LAS*, 1(1), 1–12. <https://j-las.lemkomindo.org/index.php/AFoSJ-LAS/index>
- Peraturan Menteri Pendidikan, K. R. D. T. I. (2021). Peraturan Menteri Pendidikan, Kebudayaan, Riset, Dan Teknologirepublik Indonesia Nomor40 Tahun 2021tentang Penugasanguru Sebagai Kepala Sekolah. *Peraturan Menteri Pendidikan, Kebudayaan, Riset, Dan Teknologirepublik Indonesia*, 1–19.
- Russamsi, Y., Hadian, H., & Nurlaeli, A. (2020). Pengaruh Kepemimpinan Kepala Sekolah Dan Peningkatan Profesional Guru Terhadap Kinerja Guru Di Masa Pandemi Covid-19 (Vol. 2, Issue 3).
<http://jurnal.permapendis.org/index.php/managere/index>
<http://jurnal.permapendis.org/index.php/managere/index>
- Sultoni, J. D. P., & Amirul Adha, M. (2020). *One-Roof School Principal Excellence Leadership Development Model in Indonesia*. 250–255.
- Xie, L. , C. Z. , W. H. , Z. C. , & J. J. (2020). Bibliometric and Visualized Analysis of Scientific Publications on Atlantoaxial Spine Surgery Based on Web of Science and VOS viewer. *World Neurosurgery*, e4, 435435–442. e4.
- Yokota, H. (2020). Mapping four leadership styles in Japan: how has the role of the principal been shaped by policies? *Journal of Educational Administration*, 58(2), 187–207. <https://doi.org/10.1108/JEA-03-2019-0032>