JMSP (Jurnal Manajemen dan Supervisi Pendidikan)
Volume 9 Nomor 2 Bulan Maret Tahun 2025

ISSN : 2541-4429 (Online)
: 2580-3417 (Print)
Available Online in http://journal2.um.ac.id/index.php/jmsp/

The State of Agile Leadership Research: A Bibliometric Exploration of Academic Contributions

Helina Apriyani, Aan Komariah, Asep Suryana, Nur Aedi
Universitas Pendidikan Indonesia
Jl. Dr. Setiabudhi No.229 Bandung
E-mail: helina.apriyani@upi.edu

Article received: January 2025, Revision: March 2025, Approval: March 2025
DOI: 10.17977/um025v9i22025p237

Abstract: This study explores the state of agile leadership research through a bibliometric analysis of academic contributions from 2010 to 2024. Agile leadership has gained increasing attention in response to rapid organizational changes, digital transformation, and the need for adaptable leadership models. Despite its growing relevance, existing literature on agile leadership remains fragmented across disciplines and lacks comprehensive synthesis. To address this gap, the study employed a bibliometric approach using the Scopus database, with the keyword "agile leader," identifying 70 relevant publications. Data were analyzed using VOSviewer and Biblioshiny to map keyword co-occurrences, citation patterns, author productivity, and country contributions. The results reveal a significant increase in agile leadership research beginning in 2020, with the highest number of publications recorded in 2023. Indonesia, Turkey, and India emerged as the most prolific contributing countries. Keyword co-occurrence analysis uncovered several thematic clusters, including organizational agility, digital transformation, crisis management, innovation, and leadership style. These clusters reflect the multidimensional nature of agile leadership and its intersection with strategic flexibility, team performance, and emotional intelligence, particularly during uncertain conditions such as the COVID-19 pandemic. This study contributes to the academic discourse by offering a systematic overview of how agile leadership research has evolved and where it is currently concentrated. The findings highlight the global relevance of agile leadership and suggest future research directions, especially its application in the educational sector. The study underscores the importance of agile leadership as a framework for fostering resilience, innovation, and adaptability in complex organizational settings
Keywords: Agile Leadership, Bibliometric Analysis, Digital Transformation, Organizational Agility, VOSviewer

INTRODUCTION

In today's rapidly evolving business landscape, organizations are increasingly challenged to adapt to continuous changes driven by technological advancements, market fluctuations, and shifting customer expectations (Karneli, 2022; Kaya, 2022). Traditional leadership models, often characterized by hierarchical structures and rigid processes, are proving insufficient in addressing the complexities of the modern environment (Bates, 2010; Crippen, 2012; Yu & Pitafi, 2024). In response, agile leadership has emerged as a critical paradigm, emphasizing flexibility, collaboration, and responsiveness to change (Nissim & Simon, 2023; Rialti & Filieri, 2024). Agile leadership empowers

organizations to navigate uncertainties by fostering a culture that values adaptability, continuous learning, and customer-centric approaches (Laval et al., 2021; Nissim & Simon, 2023; Noguera et al., 2018).

Agile leadership originates from the principles of agile methodologies, which were initially developed within the software development industry to enhance productivity and product quality (Hariyani & Mishra, 2023; Mishra & Chakraborty, 2023; Turan & Cinnioğlu, 2022). Over time, these principles have transcended their origins, influencing leadership practices across various sectors. This leadership style is not confined to organizational hierarchies but extends to creating networks of empowered teams capable of driving organizational success in a volatile environment.(Jain et al., 2024; Wan & Tan, 2021)

Despite the growing recognition of agile leadership's importance, academic research on the topic has been dispersed across disciplines and lacks a cohesive understanding of its development and impact (Chhibber & Sharma, 2021; Theobald et al., 2020). Existing literature primarily focuses on conceptual frameworks, case studies, and practical implementations within specific industries(Dwiridotjahjono et al., 2024; Mishra & Chakraborty, 2023; Shukla et al., 2023; Weiss et al., 2023). However, there is a paucity of comprehensive analyses that map the evolution of agile leadership research, identify key contributors, and uncover prevailing themes and future directions.

Current research on agile leadership has expanded significantly, reflecting its growing importance in both academic and practical contexts. (Porkodi, 2024; Ratnawati et al., 2024; Weiss et al., 2023) Studies have explored agile leadership in relation to digital transformation, innovation management, and organizational change (Anggadwita et al., 2021; Bresciani et al., 2021; Khadair et al., 2024; Turan & Cinnioğlu, 2022). Scholars have examined the role of agile leadership in enhancing team performance, employee engagement, and organizational resilience.

However, the literature is fragmented, with research scattered across various journals, conferences, and disciplines such as management, information systems, and organizational psychology. There is a lack of consolidation that provides a holistic view of the field's development. Existing studies often focus on qualitative analyses, case studies, or theoretical explorations without integrating findings through quantitative bibliometric methods (Jain et al., 2024; McPherson, 2016; Nissim & Simon, 2023; Rialti & Filieri, 2024).

Given the dispersed nature of agile leadership research, there is a clear need for a comprehensive bibliometric analysis that systematically examines the academic contributions to this field. Such an analysis can identify trends, key authors, influential publications, and collaborative networks. It can also reveal thematic focuses and highlight areas that require further exploration.

The research gap lies in the absence of a study that quantitatively maps the intellectual landscape of agile leadership. Without this, it is challenging for scholars and practitioners to understand the progression of the field, recognize influential works, and identify emerging themes or gaps that warrant

future research.

METHOD

This study employed a bibliometric methodology to systematically analyze the scholarly landscape of agile leadership research. Bibliometrics, as a set of quantitative and statistical techniques applied to scientific publications, enables the identification of publication trends, influential authors, key journals, prominent institutions, and thematic patterns within a given field (Abbas et al., 2022; Aboudahr & Govindarajoo, 2023; Cecilia-Martín et al., 2020; Rosário & Raimundo, 2024). By drawing on these methods, the present research aims to offer a comprehensive overview of the intellectual structure, developmental trajectory, and emerging hotspots in agile leadership studies (Aboudahr & Govindarajoo, 2023; Kumar et al., 2023; Rosário & Raimundo, 2024; Zhang et al., 2023).

Data Source and Search Strategy

The data for this analysis were extracted from Scopus, one of the largest and most reputable multidisciplinary databases of peer-reviewed literature (Cecilia-Martín et al., 2020; Pham-Duc et al., 2022). Scopus's extensive coverage across diverse subject areas ensures a representative snapshot of the field. To capture the breadth of literature related to agile leadership, a keyword search was conducted using the term *"agile leader*" (with the asterisk as a truncation symbol to include variations such as "agile leaders" or "agile leadership"). The search was confined to the keyword fields to ensure relevance while minimizing extraneous materials. In order to focus on the contemporary development of the field, a publication year filter was applied, restricting results to the period from 2010 onward. The search and data retrieval were completed in November 2024 to provide the most up-to-date overview at the time of analysis.

Upon execution of the query, a total of 70 publications were identified. These documents comprised journal articles, conference papers, and other scholarly outputs directly addressing or conceptually linked to the notion of agile leadership. All retrieved records were exported in compatible formats (e.g., CSV or BibTeX) to ensure seamless integration with subsequent analysis tools.

Tools for Analysis

Two specialized tools were employed to facilitate a multifaceted bibliometric analysis: VOSviewer. VOSviewer was utilized primarily for constructing and visualizing bibliometric networks. Its strength lies in generating high-quality graphical representations of co-authorship networks, keyword co-occurrence maps, and citation patterns (Hamidah et al., 2020; van Eck & Waltman, 2010, 2017). Through these visualizations, clusters of related concepts, scholars, or research themes become more readily interpretable.

Analytical Procedures

This study integrated both performance analysis and science mapping approaches. Performance

analysis focused on identifying the most productive authors, institutions, and countries, as well as the most influential journals and highly cited documents. Science mapping techniques were then applied to uncover intellectual patterns, thematic clusters, and collaboration networks. Cross-referencing these patterns with temporal trends enabled the identification of emerging research themes and potential future directions in the agile leadership domain.

RESULTS AND DISCUSSION

RESULT

Research Tren in Agile Leadership

To determine the publication trend on the topic of agile leadership from the Scopus database, we present a year-by-year distribution of documents published from 2016 through 2024 (Although the search started in 2010 but the first article was in 2016) related to agile leadership, as shown in Figure 1. Initially, the number of publications remains relatively low and somewhat erratic between 2016 and 2019, never surpassing a handful of documents per year. Starting in 2020, there is a noticeable upward trajectory, with the volume of publications steadily increasing each year. This is quite interesting considering the covid pandemic in the year that occurred in that period which was basically a decrease in a research topic (Gutema et al., 2024; Rosário & Raimundo, 2024; Susilayati et al., 2024). The trend reaches its highest point in 2023, showing the largest number of documents published, followed by a slight decline in 2024.

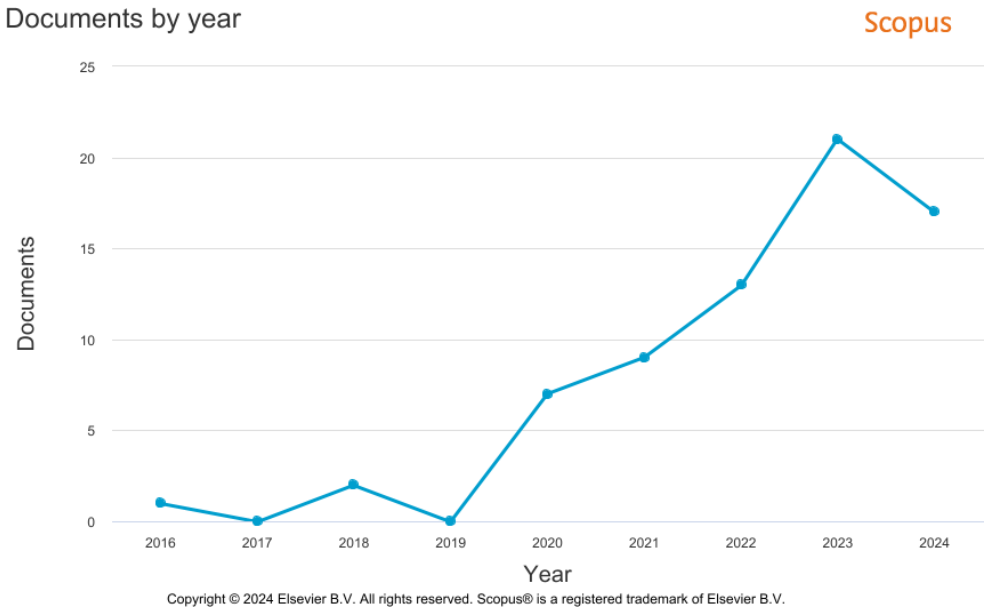

Figure 1. Country Publication Overtime

This publication trend suggests a growing academic interest in agile leadership that gained momentum around 2020, likely reflecting shifts in organizational practices and scholarly recognition of agile methods. The surge leading into 2023 indicates an intensified focus, possibly driven by

contemporary challenges in rapidly changing business environments and heightened awareness of agile leadership principles. The minor reduction in 2024 may represent a natural fluctuation or indicate that the field's rapid growth phase is stabilizing. Additionally, it is possible that the lower count for 2024 simply reflects incomplete data or the lag time in indexing newly published works.

Document and Country Alanysis

Table 1 presents a selection of the most cited publications on agile leadership, listing the top five works in descending order of their total citation count. The table includes the author's name, publication title, publication year, type of source, and the total number of citations. Notably, these publications were released between 2020 and 2022 and comprise both journal articles and a book chapter, reflecting a blend of scholarly formats that have garnered significant attention from the academic community.

Table 1. Most Cited Publications

No	Author	Title	Publication Years	Publication Type	Total Citation
1	Fachrunnisa et al. (2020)	Towards SMEs' digital transformation: The role of agile leadership and strategic flexibility	2020	Article Journal	88
2	Aldianto et al. (2021)	Toward a business resilience framework for startups	2021	Article Journal	86
3	Strode et al. (2022)	A teamwork effectiveness model for agile software development	2022	Article Journal	48
4	Attar & Abdul-Kareem (2020)	The Role of Agile Leadership in Organisational Agility	2020	Book Chapter	47
5	Chen et al. (2022)	Accelerating Innovation Efficiency through Agile Leadership: The CEO Network Effects in China	2022	Article Journal	41

The most cited publications highlight the growing scholarly engagement with agile leadership concepts, as evidenced by their high citation counts and recent publication years. The topics covered ranging from SMEs' digital transformation, business resilience frameworks, agile software

development teamwork, organizational agility, and innovation efficiency underscore the breadth and adaptability of agile leadership principles across various organizational contexts. The concentration of citations in recent years suggests that agile leadership resonates strongly with current management challenges, prompting intensive discourse and further research in this dynamic field.

Furthermore, regarding the analysis of the author's country of origin, figure 2 displays the number of documents related to agile leadership produced by various countries, ranking them in descending order. Indonesia stands out with the highest count (Aldianto et al., 2021; Siregar et al., 2023), closely followed by Turkey (Akkaya & Üstgörül, 2020; Attar & Abdul-Kareem, 2020), while India (Murugan & Natarajan, 2022), Germany (Geffers et al., 2024), and Malaysia (Fachrunnisa et al., 2020) also show notable contributions. The data is limited to the top 15 countries, with nations such as the United Kingdom, United States, United Arab Emirates, Italy, and New Zealand included, each with a modest but visible presence in the field

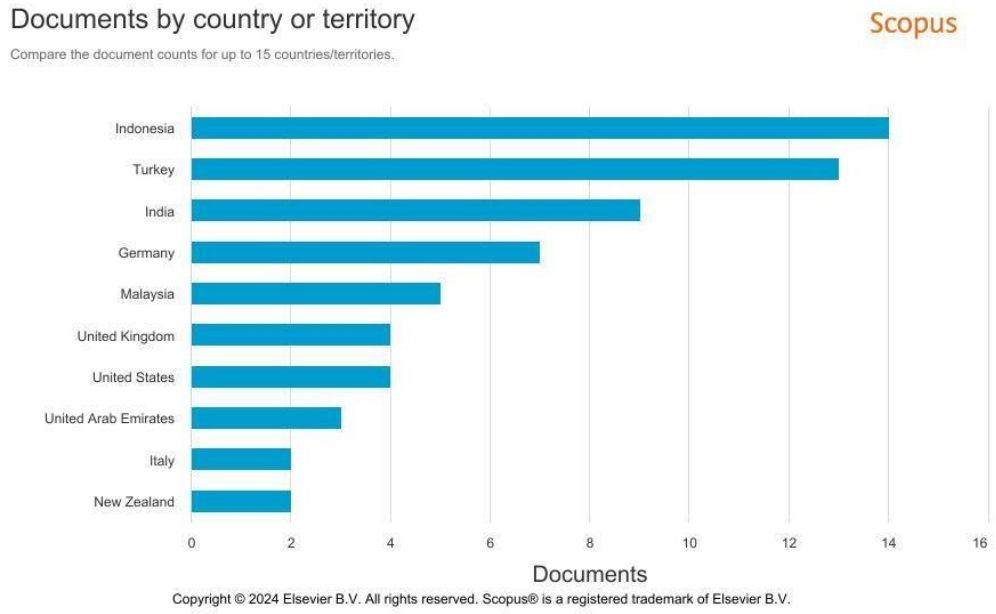

Figure 2. Most Productive Countrty Publication

This geographical distribution highlights an active global interest in agile leadership research, with a particularly strong representation from Indonesia and Turkey. The prominence of developing and emerging economies, alongside more traditionally research-intensive nations like Germany, the United Kingdom, and the United States, suggests that agile leadership ideas resonate across diverse cultural and economic contexts. The variety of countries represented indicates that the concept of agile leadership has become internationally recognized as an effective approach to organizational management, potentially driven by the widespread need for adaptability and resilience in increasingly dynamic global markets.

Co-Occureance Keyword Analysis and key themes

The network visualization produced by VOSviewer (Figure 3) illustrates the co-occurrence

relationships among keywords frequently associated with "agile leadership." At the center of the network is the term "agile leadership," serving as a hub that connects to numerous related concepts. The size and proximity of nodes represent the strength of their association—larger nodes are more frequently mentioned, and closer nodes share a stronger conceptual link. The lines between nodes indicate co-occurrence, with thicker lines signifying higher frequency of joint appearance. Overall, the network presents a multifaceted structure, highlighting that agile leadership is intertwined with a wide range of organizational, technological, and psychological dimensions.

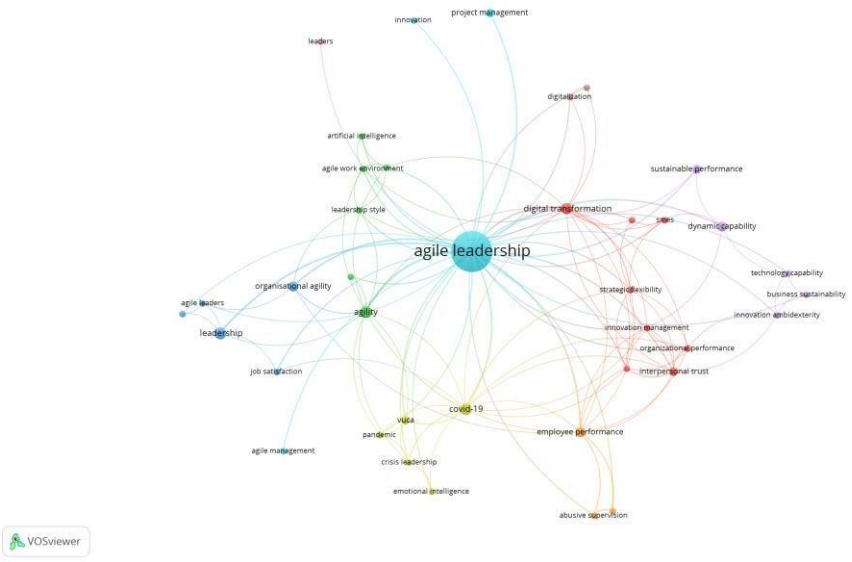

Figure 3. Keyword Network Co-Occurance

A broad sweep of the network reveals that "agile leadership" is linked not only to conceptual cousins like "agility" and "organizational agility" but also to terms reflecting digital transformation, innovation, performance outcomes, and leadership styles. This suggests that the discourse around agile leadership extends beyond traditional management literature, finding resonance in areas such as digitalization, strategic flexibility, and even emotional and behavioral factors. The network implies that research on agile leadership often overlaps with studies on technological change, dynamic capabilities, and cultural shifts toward more flexible and responsive organizational models. Additionally, the presence of terms related to global crises, such as "COVID-19" and "crisis leadership," indicates that agile leadership has gained importance as organizations struggle to adapt to unforeseen and rapidly evolving challenges. Within the network, distinct clusters often differentiated by coloremerge, each representing a thematic grouping of related keywords:

Organizational Agility and Leadership Styles (Green Cluster):

In one cluster, keywords like "agility," "organizational agility," "agile work environment," and "leadership style" appear together. This cluster emphasizes the internal organizational processes and structures that support agile leadership. The focus here is on how leaders foster adaptability and flexible operations, underscoring the interplay between leadership behavior and a corporate culture

conducive to rapid change.

Traditional Leadership Concepts and Human Factors (Blue Cluster):

Another cluster, connected to terms like "leadership," "agile leaders," "job satisfaction," and "agile management," highlights the human and managerial dimensions of agile leadership. Here, the emphasis is on the role of leaders themselves—how they influence employee well-being, job satisfaction, and the effective management of projects. This cluster suggests that agile leadership is deeply entwined with interpersonal dynamics and the cultivation of a supportive workplace environment.

Digital Transformation, Innovation, and Performance (Red Cluster):

Another prominent cluster groups "digital transformation," "innovation management," "organizational performance," "strategic flexibility," and related terms. This cluster underscores the strategic and technological aspects of agile leadership, connecting it to the enhancement of performance metrics, the adoption of cutting-edge technologies, and the cultivation of an innovation-friendly atmosphere. Agile leadership here emerges as a driver of digital modernization and sustained competitive advantage.

Crisis Response, Emotional and Social Factors (Yellow/Orange Cluster):

A further cluster involves terms like "COVID-19," "pandemic," "VUCA," "crisis leadership," "emotional intelligence," and "employee performance." This group signals that agile leadership is considered highly relevant in times of instability and complexity. Leaders who demonstrate agility are seen as better equipped to navigate crises, maintain employee morale, and adjust strategies in environments defined by volatility, uncertainty, complexity, and ambiguity.

DISCUSSION

The findings of this bibliometric study provide significant insight into the evolving landscape of agile leadership as a multidisciplinary and globally relevant research domain. Agile leadership, initially rooted in software development practices, has rapidly expanded beyond its origin to address leadership challenges in dynamic, uncertain, and fast-changing environments (Rialti & Filieri, 2024). The increase in scholarly publications from 2020 onward underscores a heightened awareness of the need for leadership models that emphasize adaptability, responsiveness, and continuous learning, hallmarks of the agile leadership paradigm.

The surge in publications during and after the COVID-19 pandemic is particularly telling. The pandemic acted as a stress test for organizations, highlighting the inadequacy of rigid, top-down leadership models. Agile leadership emerged as a viable alternative that enabled organizations to maintain productivity, morale, and innovation in uncertain times (Nissim & Simon, 2023; Weiss et al., 2023). The frequency of terms such as "crisis leadership," "emotional intelligence," and

"VUCA" within the keyword co-occurrence network suggests that researchers increasingly associate agile leadership with resilience and crisis responsiveness.

A dominant theme identified in the keyword analysis is the close relationship between agile leadership and digital transformation. Numerous studies have emphasized the necessity for leaders to embrace agile thinking in order to navigate digital disruptions (Khadair et al., 2024; Bresciani et al., 2021). Agile leaders are expected to drive innovation by fostering a culture of experimentation and rapid iteration, enabling their organizations to adapt products, services, and strategies in real-time (Rialti & Filieri, 2024). The strong co-occurrence of "innovation," "digital transformation," and "strategic flexibility" with agile leadership suggests that leadership in the digital era is inseparable from agility.

Agile leadership is also increasingly viewed as a driver of organizational agility—defined as an organization's ability to sense and respond to changes efficiently and effectively (Attar & Abdul-Kareem, 2020). This reinforces earlier conceptualizations where agile leadership is characterized by enabling decentralized decision-making, empowering teams, and promoting continuous feedback loops (Laval et al., 2021). The presence of keywords like "organizational agility" and "team performance" in the co-occurrence clusters supports the argument that agile leaders are instrumental in building agile cultures, rather than simply enforcing agile processes.

Another significant cluster from the results is the intersection of agile leadership with human factors such as job satisfaction, emotional intelligence, and leadership style. This reflects a shift in leadership studies toward a more human-centered approach, where leadership effectiveness is increasingly linked to psychological safety, empathy, and servant leadership traits (Sudrajat, 2023; Jain et al., 2024). In volatile and complex contexts, agile leaders must not only manage tasks but also nurture people. This humanistic dimension is critical, particularly in hybrid or remote work environments that demand emotional awareness and interpersonal sensitivity (Noguera et al., 2018).

Geographically, the strong presence of countries such as Indonesia, Turkey, and India in agile leadership research may indicate a broader shift in scholarly production from Western-dominated perspectives to more inclusive and contextualized leadership discourses. Researchers from these regions are increasingly exploring how agile leadership is interpreted and implemented within culturally diverse and economically varied contexts (Dwiridotjahjono et al., 2024). This global spread enriches the field by introducing localized challenges and adaptations, such as aligning agile practices with hierarchical structures or collective cultural values.

Despite these advances, the literature remains fragmented, often focused on industry-specific case studies or conceptual frameworks that lack empirical validation (Chhibber & Sharma, 2021; Porkodi, 2024). While this study reveals growing interest and thematic clustering, it also highlights a scarcity of longitudinal and cross-sectoral research that rigorously examines agile leadership's

long-term effects on organizational performance and transformation.

One particularly underexplored area is the application of agile leadership in the education sector. While agility is widely recognized as essential in tech and business domains, its relevance in educational leadership remains understudied. Agile principles—such as iterative decision-making, team empowerment, and stakeholder responsiveness—could be transformative in educational settings facing frequent policy shifts, technological integration, and complex stakeholder demands (Nissim & Simon, 2023). Future studies could explore how school principals or university leaders adopt agile mindsets to navigate curriculum reforms, digital learning, and institutional resilience.

Agile leadership in recent scholarship reflects an ongoing transition in leadership thought. It shifts from rigid control toward adaptability, from directive styles to participatory engagement, and from risk aversion to experimental learning. Agile leadership is not merely a trend but a response to the complexity and unpredictability that define the current era. However, to fully leverage its potential, future research should aim for theoretical consolidation, sectoral diversification, and the development of contextualized models that reflect cultural and organizational differences.

CONCLUSION AND RECOMMENDATION

CONCLUSION

Based on the discussion above, the research on agile leadership has experienced a clear upward trend in publication volume since around 2020, reflecting growing scholarly and practical interest in how organizations adapt to dynamic environments. This surge in output is supported by a geographically diverse author base, with contributions stemming from both emerging economies such as Indonesia and Turkey and established research hubs like the United Kingdom, Germany, and the United States, indicating that agile leadership resonates across varied cultural and economic contexts. The keyword co-occurrence analysis further reveals that agile leadership research is inherently multidimensional, linking concepts like organizational agility, digital transformation, innovation, and employee performance with broader issues of crisis management, emotional intelligence, and leadership style. In essence, the literature underscores agile leadership as a holistic framework, shaping how organizations navigate complexity, leverage technology, and foster resilient, adaptive work cultures.

RECOMMENDATION

Future research in the domain of agile leadership should consider integrating agile principles into the educational sector, exploring how school leaders, university administrators, and policy makers can adapt management and teaching practices to rapidly changing academic contexts. Studies could, for instance, examine how agile leadership models influence the resilience of educational institutions facing digital transformation, shifts in curriculum standards, and evolving

student needs. Researchers might also focus on developing frameworks that guide educational leaders in adopting iterative decision-making processes, fostering collaborative faculty cultures, and enhancing responsiveness to stakeholder feedback. By doing so, future investigations can illuminate strategies that enable educational organizations to remain adaptive, innovative, and student-centered, ultimately strengthening both leadership effectiveness and learning outcomes.

REFERENCES

Abbas, A. F., Jusoh, A., Mas'od, A., Alsharif, A. H., & Ali, J. (2022). Bibliometrix analysis of information sharing in social media. *Cogent Business & Management*, *9*(1). https://doi.org/10.1080/23311975.2021.2016556

Aboudahr, S. M. F., & Govindarajoo, M. V. (2023). Quality Management Studies in Higher Education: A Bibliometric Analysis. *International Journal of Academic Research in Economics and Management Sciences*, *12*(2). https://doi.org/10.6007/ijarems/v12-i2/16999

Akkaya, B., & Üstgörül, S. (2020). Leadership Styles and Female Managers in Perspective of Agile Leadership. In *Agile Business Leadership Methods for Industry 4.0*. Emerald Group Publishing Ltd. https://doi.org/10.1108/978-1-80043-380-920201008

Aldianto, L., Anggadwita, G., Permatasari, A., Mirzanti, I. R., & Williamson, I. O. (2021). Toward a business resilience framework for startups. *Sustainability (Switzerland)*, *13*(6). https://doi.org/10.3390/su13063132

Anggadwita, G., Suganda, G. A. D., Azis, E., & Bagus Profityo, W. (2021). The Implementation of Technology Capabilities, Agile Leadership and Innovation Ambidexterity to Improve SMEs' Sustainability in Bandung. In L. V., L. H.G., & C. E. (Eds.), *Proceedings of the International Conference on Industrial Engineering and Operations Management* (pp. 125 – 135). IEOM Society. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85130272533&partnerID=40&md5=2690579ffce00cc68d8b151a9d3c489f

Attar, M., & Abdul-Kareem, A. (2020). The Role of Agile Leadership in Organisational Agility. In *Agile Business Leadership Methods for Industry 4.0*. Emerald Group Publishing Ltd. https://doi.org/10.1108/978-1-80043-380-920201011

Bates, R. (2010). History of educational leadership/management. In *International Encyclopedia of Education*. Elsevier Ltd. https://doi.org/10.1016/B978-0-08-044894-7.00412-7

Bresciani, S., Ferraris, A., Romano, M., & Santoro, G. (2021). Agility for Successful Digital Transformation. In *Digital Transformation Management for Agile Organizations: A Compass to Sail the Digital World* (pp. 167–187). Emerald Publishing Limited. https://doi.org/10.1108/978-1-80043-171-320211010

Cecilia-Martín, M., Rubio-González, L., Morón-Marchena, J.-A., & Cobos-Sanchiz, D. (2020). Teacher burnout: a bibliometric analysis of scientific production indexed on Scopus; [Burnout docente: un análisis bibliométrico sobre la producción científica indexada en Scopus]. *International Journal of Educational Research and Innovation*, *2020*(14), 197 – 210. https://doi.org/10.46661/ijeri.4949

Chen, X. H., Tee, K., & Chang, V. (2022). Accelerating Innovation Efficiency through Agile Leadership: The CEO Network Effects in China. *Technological Forecasting and Social Change*, *179*, 121602. https://doi.org/10.1016/j.techfore.2022.121602

Chhibber, P., & Sharma, A. (2021). Gender diversity: an approach towards agile women employees in the VUCA business environment. *World Review of Entrepreneurship, Management and Sustainable Development*, *1*(1), 1. https://doi.org/10.1504/wremsd.2021.10043899

Crippen, C. (2012). Enhancing authentic leadership-followership: Strengthening school relationships. *Management in Education*, *26*(4), 192 – 198. https://doi.org/10.1177/0892020612439084

Dwiridotjahjono, J., Yuhertiana, I., Partoyo, Tannar, O., Wijaya, S. Y., & Wibawani, S. (2024). DEVELOPING AGILE LEADERSHIP WITH STATE DEFENSE CHARACTER IN INDONESIA. *Revista de Gestao Social e Ambiental* , *18*(6). https://doi.org/10.24857/rgsa.v18n6-137

Fachrunnisa, O., Adhiatma, A., Lukman, N., & Majid, M. N. Ab. (2020). Towards SMEs' digital transformation: The role of agile leadership and strategic flexibility. *Journal of Small Business Strategy*, *30*(3), 65 – 85. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097440280&partnerID=40&md5=89a32090d7e167f89f082fa60322eb93

Geffers, K., Bretschneider, U., Eilers, K., & Oeste-Reiß, S. (2024). Leading Teams in Today's Dynamic Organizations: The Core Characteristics of Agile Leadership. In B. T.X. (Ed.), *Proceedings of the Annual Hawaii International Conference on System Sciences* (pp. 4868 – 4877). IEEE Computer Society. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85199777475&partnerID=40&md5=75ed12a7c8bc379b0ffb4601b95349ba

Gutema, D. M., Pant, S., & Nikou, S. (2024). Exploring key themes and trends in international student mobility research —A systematic literature review. *Journal of Applied Research in Higher Education*, *16*(3), 843–861. https://doi.org/10.1108/JARHE-05-2023-0195

Hamidah, I., Sriyono, S., & Hudha, M. N. (2020). A Bibliometric Analysis of Covid-19 Research using VOSviewer. *Indonesian Journal of Science and Technology*, *5*(2), 209–216. https://doi.org/10.17509/ijost.v5i2.24522

Hariyani, D., & Mishra, S. (2023). A descriptive statistical analysis of enablers for integrated sustainable-green-lean-six sigma-agile manufacturing system (ISGLSAMS) in Indian manufacturing industries. *Benchmarking*. https://doi.org/10.1108/BIJ-06-2022-0344

Jain, A., Kamat, S., Saini, V., Singh, A., & Whig, P. (2024). *Agile Leadership* (pp. 32–47). https://doi.org/10.4018/979-8-3693-3318-1.ch003

Karneli, O. (2022). Application of the Concept of Strategic Human Resources Management in Improving Organizational Performance in the Vuca Era. *Eduvest - Journal Of Universal Studies*, *2*(4), 704–709. https://doi.org/10.36418/edv.v2i4.381

Kaya, Y. (2022). The Importance of the Organizational Structure to be Competitive in VUCA World. In B. Akkaya, M. W. Guah, K. Jermsittiparsert, H. Bulinska-Stangrecka, & Y. Kaya (Eds.), *Agile Management and VUCA-RR: Opportunities and Threats in Industry 4.0 towards Society 5.0* (pp. 207–214). Emerald Publishing Limited. https://doi.org/10.1108/978-1-80262-325-320220014

Khadair, E. K., Hamdan, A., & Kanan, M. (2024). The Impact of Agile Leadership on Team Performance. *Studies in Systems, Decision and Control*, *538*, 909 – 915. https://doi.org/10.1007/978-3-031-62102-4_73

Kumar, N., Singh, A., Gupta, S., Kaswan, M. S., & Singh, M. (2023). Integration of Lean manufacturing and Industry 4.0: a bibliometric analysis. *The TQM Journal*, *ahead-of-print*(ahead-of-print). https://doi.org/10.1108/TQM-07-2022-0243

Laval, J., Fleury, A., Karami, A. B., Lebis, A., Lozenguez, G., Pinot, R., & Vermeulen, M. (2021). Toward an innovative educational method to train students to agile approaches in higher education: The a.l.p.e.s. *Education Sciences*, *11*(6). https://doi.org/10.3390/educsci11060267

McPherson, B. (2016). Agile, adaptive leaders. *Human Resource Management International Digest*, *24*(2), 1 – 3. https://doi.org/10.1108/HRMID-11-2015-0171

Mishra, N., & Chakraborty, T. (2023). Employee engagement perspectives in agile organizations: Managing people in Industry 4.0. In *Agile Leadership for Industry 4.0: An Indispensable Approach for the Digital Era.* Apple Academic Press. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162272062&partnerID=40&md5=ce1b4f4d6bfbefdae50143396fa8857a

Murugan, M., & Natarajan, P. M. (2022). AGILE LEADER'S EMOTIONAL RESILIENCE AND THEIR DIGITAL INNOVATIONS AND BUSINESS TRANSFORMATIONS IN A WORKPLACE IN MSME SECTOR (NEW NORMAL) TO MITIGATE COVID-19 & ITS SUCCESSORS. *International Journal of Professional Business Review*, *7*(4). https://doi.org/10.26668/businessreview/2022.v7i4.e755

Nissim, Y., & Simon, E. (2023). Agilecation: Agile Leadership in a Higher Education Institution (HEI) during the Covid-19 Pandemic a Test Case. *European Journal of Contemporary Education*, *12*(1), 139 – 151. https://doi.org/10.13187/ejced.2023.1.139

Noguera, I., Guerrero-Roldán, A. E., & Masó, R. (2018). Collaborative agile learning in online environments: Strategies for improving team regulation and project management. *Computers &*

Education. https://www.sciencedirect.com/science/article/pii/S0360131517302129

Pham-Duc, B., Tran, T., Huu Hoang, D., & Bao Do, C. (2022). Global scientific literature on human resource development: a bibliometric analysis using Scopus database. *European Journal of Training and Development*. https://doi.org/10.1108/EJTD-01-2022-0004

Porkodi, S. (2024). The effectiveness of agile leadership in practice: A comprehensive meta-analysis of empirical studies on organizational outcomes. *Journal of Entrepreneurship, Management and Innovation*, *20*(2), 117 – 138. https://doi.org/10.7341/20242026

Ratnawati, S., Wibowo, A., Nastiti, R. T., & Sitalaksmi, S. (2024). Establishment of sustainable organizational identity: proposition of anthropomorphism, agile leadership, organizational change, and competitive advantage. *Cogent Business and Management*, *11*(1). https://doi.org/10.1080/23311975.2024.2315694

Rialti, R., & Filieri, R. (2024). Leaders, let's get agile! Observing agile leadership in successful digital transformation projects. *Business Horizons*, *67*(4), 439 – 452. https://doi.org/10.1016/j.bushor.2024.04.003

Rosário, A. T., & Raimundo, R. (2024). Sustainable Entrepreneurship Education: A Systematic Bibliometric Literature Review. *Sustainability (Switzerland)*, *16*(2). https://doi.org/10.3390/su16020784

Shukla, S., Kalangade, J., & Iyer, R. (2023). Amul: An agile brand and its leadership: "Road to Self-reliance." In *Agile Leadership for Industry 4.0: An Indispensable Approach for the Digital Era*. Apple Academic Press. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162250027&partnerID=40&md5=b00b1a7521f09d276e842ad11355891f

Siregar, A. A., Afiff, A. Z., & Halim, R. E. (2023). Linking agile leadership and business sustainability through the mediation of political and social capabilities. *Journal of Open Innovation: Technology, Market, and Complexity*, *9*(4). https://doi.org/10.1016/j.joitmc.2023.100153

Strode, D., Dingsøyr, T., & Lindsjorn, Y. (2022). A teamwork effectiveness model for agile software development. *Empirical Software Engineering*, *27*(2). https://doi.org/10.1007/s10664-021-10115-0

Susilayati, M., Hardyanto, W., & Widiyatmoko, A. (2024). The research trends and contributions of science education during the COVID-19 pandemic: A narrative systematic literature review of publications in selected journals. *Review of Education*, *12*(1). https://doi.org/10.1002/rev3.3464

Theobald, S., Prenner, N., Krieg, A., & Schneider, K. (2020). Agile Leadership and Agile Management on Organizational Level - A Systematic Literature Review. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, *12562 LNCS*, 20 – 36. https://doi.org/10.1007/978-3-030-64148-1_2

Turan, H. Y., & Cinnioğlu, H. (2022). Agile leadership and employee performance in VUCA world. In *Agile Management and VUCA-RR: Opportunities and Threats in Industry 4.0 towards Society 5.0*. Emerald Group Publishing Ltd. https://doi.org/10.1108/978-1-80262-325-320220003

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

van Eck, N. J., & Waltman, L. (2017). Citation-based clustering of publications using CitNetExplorer and VOSviewer. *Scientometrics*, *111*(2), 1053–1070. https://doi.org/10.1007/s11192-017-2300-7

Wan, H. L., & Tan, N. N. (2021). Agile leadership and bootlegging behavior: Does leadership coping dynamics matter? In *Agile Coping in the Digital Workplace: Emerging Issues for Research and Practice*. Springer International Publishing. https://doi.org/10.1007/978-3-030-70228-1_10

Weiss, L., Vergin, L., & Kanbach, D. K. (2023). How agile leaders promote continuous innovation-an explorative framework. In *Innovation Leadership in Practice: How Leaders Turn Ideas into Value in a Changing World*. Emerald Group Publishing Ltd. https://doi.org/10.1108/978-1-83753-396-120231012

Yu, Y., & Pitafi, S. (2024). Exploring the influence of spiritual leadership, leader – member exchange, and traditionality orientation on employee voice behavior. *BMC Psychology*, *12*(1). https://doi.org/10.1186/s40359-024-02052-6

Zhang, L., Ling, J., & Lin, M. (2023). Risk management research in East Asia: a bibliometric analysis.

International Journal of Intelligent Computing and Cybernetics, *ahead-of-print*(ahead-of-print). https://doi.org/10.1108/IJICC-10-2022-0276