

Examining Adaptive Leadership in Business via Literature Review and Bibliometric Analysis

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ABSTRACT

In today's rapidly changing world, characterized by technological disruption and socio-political complexity, traditional leadership models often prove insufficient. **Adaptive leadership** provides a flexible approach that enables people to address adaptive challenges through learning, resilience, and systemic change. Despite growing scholarly interest, research on adaptive leadership remains fragmented and lacks strong empirical support. **Systematic Literature Review (SLR) and bibliometric analysis** of 126 peer-reviewed articles published between 2010 and May 2025 from the Scopus database were employed to address these gaps. **Findings** reveal a significant rise in publications after 2020, largely influenced by the Covid-19 pandemic and accelerated organizational transformation. Using VOSviewer, the bibliometric analysis identifies influential authors such as R.A. Anderson and D.E. Bailey, leading institutions including Duke University and the University of North Carolina, and prominent publication outlets like California Management Review. Thematic mapping shows a shift from crisis leadership and healthcare to digital agility, emotional intelligence, and psychosocial resilience. **This study** strengthens the theoretical foundation of adaptive leadership by synthesizing its core competencies, including system diagnosis, distress regulation, and inclusive problem-solving, and demonstrates its practical relevance across sectors. In doing so, it supports global development goals, including SDGs 3 (Good Health and Well-being), SDGs 4 (Quality Education), SDGs 8 (Decent Work and Economic Growth), SDGs 9 (Industry, Innovation, and Infrastructure), and SDGs 16 (Peace, Justice, and Strong Institutions), positioning adaptive leadership as a key driver of sustainable organizational and societal transformation.

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1. INTRODUCTION

In an era defined by technological disruption, workforce transformation, and socio-political complexity, traditional leadership models increasingly fall short. In response, adaptive leadership [1] offers a vital framework for navigating uncertainty. It emphasizes the leader's role in mobilizing people to confront difficult challenges and adapt to change. By prioritizing facilitation, learning, and systemic transformation over

authority and control, adaptive leadership has become particularly relevant in today's dynamic organizational environment [2, 3].

The growing relevance of adaptive leadership spans sectors such as business, healthcare, education, and public administration. Scholars highlight its focus on navigating uncertainty, building resilience, and engaging stakeholders as well-aligned with the demands of 21st-century leadership [4, 5]. In the face of digital transformation and post-pandemic recovery, the ability to lead adaptively has shifted from a desirable trait to an essential competency. This relevance directly connects with the United Nations' Sustainable Development Goals (SDGs) [6]. Adaptive leadership supports SDGs 3 through strengthening health systems in times of crisis, SDGs 4 by advancing educational transformation and leadership development, SDGs 8 through promoting resilience and innovation in workplaces, SDGs 9 by fostering digital agility and technological adaptation, and SDGs 16 by enabling inclusive governance and institutional reform.

Preliminary bibliometric studies suggest a significant increase in scholarly attention to adaptive leadership since 2010, especially after global crises such as the 2008 financial downturn and the Covid-19 pandemic. However, the literature remains largely descriptive and prescriptive, with limited empirical validation [7]. Moreover, despite its global relevance, adaptive leadership literature is predominantly Western-centric, with limited representation from Global South perspectives [8]. Despite its growing importance, the academic discourse on adaptive leadership remains fragmented. While conceptual developments and case-based studies exist, a comprehensive synthesis of existing knowledge is lacking [9]. There is an evident need to consolidate diverse theoretical and empirical contributions to better understand the development, application, and evolution of adaptive leadership as a construct [10]. Furthermore, mapping the scholarly landscape through bibliometric analysis can reveal influential works, authorship patterns, collaboration networks, and thematic trends, thus guiding future research and practice [11]. A bibliometric analysis is therefore necessary to map out publication trends, influential authors, citation networks, and thematic clusters [12]. This would help identify key knowledge hubs, underexplored areas, and potential for interdisciplinary integration [13, 14].

Therefore, this study seeks to fill the gap by conducting a dual approach: a systematic literature review and a bibliometric analysis of adaptive leadership scholarship. By combining qualitative synthesis and quantitative mapping, this study aims to:

- Uncover the intellectual foundations and emerging trends in adaptive leadership research.
- Identify the most influential scholars, publications, and thematic clusters.
- Offer a critical appraisal of the conceptual evolution and practical relevance of adaptive leadership.

Collectively, these objectives provide a holistic understanding of how adaptive leadership scholarship has evolved over time and where it is heading. By addressing these aims, the study not only maps the intellectual structure of the field but also bridges the gap between theory and practice. This integrated perspective is expected to inform future research directions, encourage cross-disciplinary collaboration, and promote a more inclusive understanding of adaptive leadership that reflects diverse global contexts and challenges.

2. LITERATURE REVIEW

The concept of adaptive leadership [1, 15] is grounded in complexity theory, systems thinking, and the understanding that leadership is not about offering ready-made solutions, but about mobilizing people to face difficult realities and make necessary adjustments. Unlike traditional leadership models that emphasize authority, hierarchy, and directive decision-making, adaptive leadership stresses the importance of diagnosing system dynamics, facilitating learning, and fostering adaptive capacity among followers [16].

According to [1] and [2], adaptive leadership involves distinguishing between technical and adaptive challenges, each requiring different approaches and solutions. While technical problems can be addressed through expertise and standard procedures, adaptive challenges demand shifts in values, beliefs, and behaviors. This distinction makes adaptive leadership especially relevant in sectors experiencing rapid transformation, such as education, healthcare, public governance, and business. Adaptive leadership is defined by several core competencies:

- Diagnosing the system (Understanding organizational structures, culture, and informal power dynamics).
 - Regulating distress (Managing the pressures of change to prevent overwhelming individuals or systems).
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- Maintaining disciplined attention (Ensuring teams remain focused on difficult, adaptive issues rather than being diverted by technical fixes or distractions).
- Giving the work back to the people (Encouraging ownership, responsibility, and innovation at all levels of the organization).
- Protecting voices of leadership from below (Creating space for marginalized or less-heard perspectives to influence change) [4, 17].

These competencies reflect a leadership style that is collaborative, participatory, and oriented toward systemic transformation, contrasting with more hierarchical or prescriptive models such as transactional and transformational leadership [2, 3]. Adaptive leadership has been applied across various disciplines. In health-care, for example, it has guided responses to systemic reform and crisis management [18–20]. In education, it has been used to lead school reform, address equity issues, and implement curriculum changes [21–23]. In business, adaptive leadership helps organizations navigate market volatility, technological disruption, and organizational restructuring [2, 5].

3. RESEARCH METHODS

This study adopts a mixed-methods approach that combines a SLR with bibliometric analysis to comprehensively examine adaptive leadership research [24]. The SLR synthesizes conceptual and empirical contributions by critically evaluating peer-reviewed literature, highlighting dominant theories, methodologies, findings, and gaps [25, 26]. Complementing this, bibliometric analysis quantitatively maps publication patterns, influential authors, citation networks, keyword co-occurrences, and thematic trends, ensuring objectivity and reproducibility [13, 27–30]. The literature search was conducted using the Scopus database, chosen for its extensive coverage of peer-reviewed journals and strong relevance to academic research.

Using the keyword “Adaptive leadership,” an initial 3,860 documents were identified in the Scopus database. After limiting results to English-language publications from 2010 to May 2025, 3,137 documents remained. A refined screening restricted the dataset to works explicitly focused on adaptive leadership, yielding 126 final documents.

From the final dataset, 54 documents (42.86%) were open access, showing that nearly half of adaptive leadership research is freely available to the global community. Gold Open Access was the most common model, with 30 documents (23.81%), reflecting a preference for fully open access journals despite associated Article Processing Charges (APCs). Green Open Access followed with 29 documents (23.02%), highlighting the use of repositories to disseminate work under publisher policies. Hybrid Gold Access accounted for 10 documents (7.94%), suggesting more selective adoption due to cost, while Bronze Open Access was least represented with 4 documents (3.17%), offering free-to-read content without a reuse license.

Analysis of the 126 selected documents on adaptive leadership reveals distinct dissemination patterns. Most publications appeared in peer-reviewed journals (106 documents, 84.13%), underscoring their central role in advancing theoretical and empirical knowledge. Books accounted for 13 documents (10.32%), offering more comprehensive or integrative explorations of the topic. The remaining works were found in conference proceedings (4 documents, 3.17%) and book series (3 documents, 2.38%).

The final dataset of 126 documents was subsequently subjected to a bibliometric analysis using VOSviewer version 1.6.20. This analysis aimed to uncover key patterns, trends, and relational structures within the body of literature on adaptive leadership.

4. RESULTS AND DISCUSSION

The temporal distribution of publications on adaptive leadership from 2010 to May 2025 (Figure 1) shows a clear progression, with research output shifting from gradual emergence to accelerated growth over the 15-year period.

This trend illustrates the gradual evolution of adaptive leadership from a theoretical concept into a mature and widely explored research domain. Early studies mainly emphasized the conceptual foundation and descriptive characteristics of adaptive leadership, while more recent works have adopted systematic and bibliometric approaches to examine its patterns, influence, and applications. The continuous increase in publications

also reflects a growing academic and practical interest in applying adaptive leadership to complex environments such as healthcare, education, business, and governance. Overall, this upward trajectory demonstrates how adaptive leadership has gained recognition as a strategic framework for addressing uncertainty and organizational transformation across diverse sectors, marking a pivotal transition from conceptual emergence to broader empirical exploration in the following years.

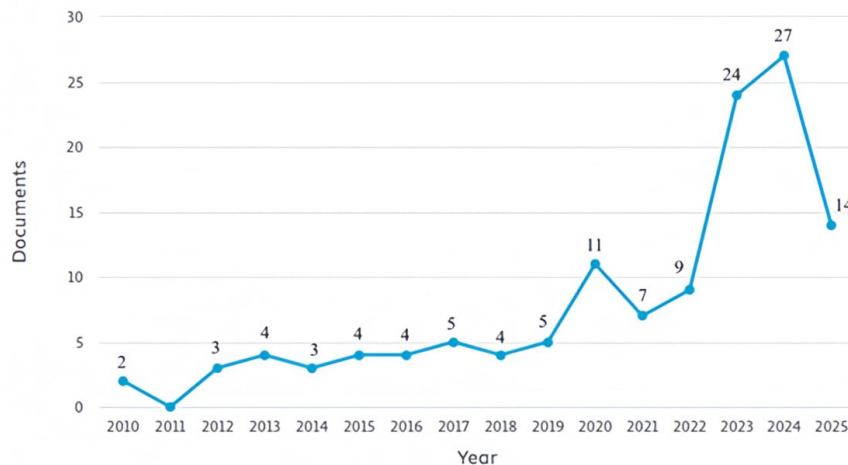


Figure 1. The publication trend on adaptive leadership (2010 to May 2025)

During the early phase (2010–2014), as shown in Figure 1, publications were limited, ranging from 2 to 4 per year, with no output in 2011. This period reflects the conceptual incubation of adaptive leadership, as the framework introduced by [15] and colleagues had not yet achieved broad recognition in scholarly discourse. Moreover, between 2015 and 2019, publication output stabilized at 4 to 5 documents annually. This period marked a foundational stage, with adaptive leadership increasingly examined in fields such as public administration, education, and healthcare. Research activity, however, remained modest, totaling 39 documents which accounted for 31 percent of the overall publications in the observed period.

A notable shift occurred in 2020, marked by 11 publications, more than double the average of previous years. This surge coincided with the Covid-19 pandemic, which disrupted systems worldwide and exposed the limitations of traditional leadership models. In response to heightened uncertainty, complexity, and volatility, scholars increasingly examined adaptive leadership as a framework for navigating such conditions. The pandemic thus became a catalyst for wider discussions on resilience, adaptability, and transformational capacity in leadership.

The upward trajectory continued in 2021 with 7 publications and in 2022 with 9, reflecting sustained interest and deeper scholarly engagement with adaptive leadership. Although slightly lower than the 2020 peak, these figures remained well above the pre-pandemic baseline, indicating that adaptive leadership was shifting from a peripheral topic to one of growing relevance across diverse contexts.

The most pronounced growth occurred in 2023 and 2024, with 24 and 27 publications respectively. Together, these two years produced 51 documents, representing 40.5 percent of the total output over the 15-year period. This surge indicates that adaptive leadership has reached a stage of academic maturity and broad recognition. During this time, the concept was increasingly applied to global challenges such as climate change, digital transformation, geopolitical instability, and equity and inclusion, highlighting its versatility and practical relevance.

Finally, the data from 2025 (up to May) already shows 14 publications, indicating that the high level of interest is not only continuing but may potentially surpass previous years if the trend persists throughout the rest of the year. If extrapolated linearly, 2025 could end with over 30 publications, setting a new annual record.

Overall, the publication trend from 2010 to 2025 reflects a growing maturity in adaptive leadership research. The consistent rise after 2020 highlights the increasing recognition of this topic as a crucial response to global uncertainty and organizational transformation. This steady growth signifies a shift from conceptual exploration toward empirical and practical applications, linking adaptive leadership to themes such as resilience, innovation, and digital transformation. It also reflects wider academic engagement, confirming adaptive lead-

ership as a key framework for managing change. This ongoing development reinforces its growing relevance in modern leadership studies.

Table 1. The Most Prolific Authors in Adaptive Leadership Research (2010–May 2025)

Rank	Author name	Affiliation	Number of articles	Total publications	H-index
1	Anderson, R.A.	The University of North Carolina, United States	6	148	34
2	Bailey, D.E.	Duke University, United States	4	97	28
3	Corazzini, K.N.	University of New Hampshire Durham, United States	2	95	27
4	Syed, F.	International University of Rabat, Morocco	2	36	18
5	Hsieh, M.	National Taiwan University, Taiwan	2	34	14
6	Thygeson, N.M.	Adaptive Health, Minnesota	2	22	10
7	Chughtai, M.S.	International Islamic University, Pakistan	3	20	9
8	Adams, J.A.	The University of North Carolina, United States	2	9	7

Table 1 presents leading authors in adaptive leadership over the 15-year period, measured by article count, total publications, and H-index. Anderson, R.A. of the University of North Carolina ranks highest, with 6 articles, 148 total publications, and an H-index of 34. His work is both prolific and widely cited, underscoring its influence on adaptive leadership scholarship and broader organizational leadership research.

Close behind is Bailey, D.E. from Duke University, with 4 adaptive leadership articles, nearly 100 total publications, and an H-index of 28. While his output in this field is lower than Anderson's, Bailey's work suggests a cross-disciplinary application of adaptive leadership within broader themes such as strategic change and organizational learning. Together, Anderson and Bailey serve as intellectual anchors for the field.

Beyond Anderson and Bailey, several other scholars have made important but more limited contributions to adaptive leadership. Corazzini, K.N. has only 2 articles in this field yet holds an H-index of 27 with 95 publications, indicating significant influence and likely interdisciplinary reach. Similarly, Syed, F. from Morocco has an H-index of 18 from 36 publications, reflecting a concentrated impact despite relatively modest output.

A second cluster of scholars, including Hsieh, Thygeson, Chughtai, and Adams, shows more modest H-indices and overall output, yet their inclusion is noteworthy. The findings represent emerging voices and applied perspectives in adaptive leadership research. For example, Thygeson's affiliation with Adaptive Health highlights the translation of theory into practice, particularly in healthcare innovation and change management. According to point 7 in Table 1, Chughtai, M.S., from Pakistan, is also notable for publishing three adaptive leadership articles, exceeding some more highly cited peers despite holding a lower H-index of 9.

Table 2. The Most Productive Sources in Adaptive Leadership Research (2010–May 2025)

Rank	Journal name	Publisher	Number of articles	CiteScore 2023	SJR 2023
1	California Management Review	Haas School of Business	4	18.4	3.330
2	Educational Management Administration and Leadership	Sage	2	8.2	1.470
3	Frontiers in Public Health	Frontiers Media S.A.	2	4.8	0.895
4	Journal of Organizational Change Management	Emerald Publishing	2	5.8	0.698
5	International Journal of Public Administration	Taylor & Francis	2	4.7	0.614
6	Sage Open	Sage	2	3.4	0.507

Rank	Journal name	Publisher	Number of articles	CiteScore 2023	SJR 2023
7	Leadership in Health Services	Emerald Publishing	2	2.9	0.453
8	Consulting Psychology Journal	American Psychological Association	2	2.5	0.421

Table 2 lists eight journals that have published at least two articles on adaptive leadership, ranked by article count and further evaluated using 2023 CiteScore and SJR metrics to indicate academic impact. The most productive journal is the California Management Review, published by the Haas School of Business, with four articles on adaptive leadership. Although modest in number, this output is notable for its influence. With a CiteScore of 18.4 and an SJR of 3.330, the journal stands out as high impact, indicating that its adaptive leadership articles are both widely read and frequently cited.

The remaining journals, ranked 2 through 8, each published two adaptive leadership articles. These include Educational Management Administration and Leadership (Sage), Frontiers in Public Health (Frontiers Media S.A.), Journal of Organizational Change Management (Emerald Publishing), International Journal of Public Administration (Taylor & Francis), Sage Open (Sage), Leadership in Health Services (Emerald Publishing), and Consulting Psychology Journal (APA). Although equal in output, these journals differ in disciplinary orientation, impact, and readership. For instance, Educational Management Administration and Leadership, with a CiteScore of 8.2 and SJR of 1.470, demonstrates strong influence in education, where adaptive leadership is applied to contexts such as school reform and institutional restructuring. Likewise, Frontiers in Public Health (CiteScore 4.8) and Leadership in Health Services illustrate the growing application of adaptive leadership in healthcare, particularly in response to crises such as the Covid-19 pandemic and broader health system reforms.

On the other hand, the Journal of Organizational Change Management and the International Journal of Public Administration underscore the importance of adaptive leadership in organizational transformation and public governance. The variety of publishers, including Sage, Taylor & Francis, Emerald Publishing, and APA, reflects the broad scholarly interest in adaptive leadership across diverse academic and professional fields.

Table 3 provides a dual perspective on the research productivity related to adaptive leadership by identifying both the most active academic institutions and the countries from which this scholarship originates. By cross-referencing institutional and national data, this study gain valuable insight into how adaptive leadership has developed as a field globally.

Duke University leads the institutional ranking with 8 adaptive leadership articles, the highest in the dataset. With more than 281,000 total publications, its prominence reflects both scale and disciplinary focus. Known for interdisciplinary research, Duke's work on adaptive leadership intersects with strengths in public policy, medicine, and organizational change. This leadership position also reinforces the dominance of U.S. institutions in the field, particularly those addressing real-world leadership challenges.

Table 3. The Most Productive Affiliations and Countries in Adaptive Leadership Research

Most Productive Affiliations				Most Productive Countries			
Rank	Affiliations	Number of articles	Total publications	Rank	Countries	Number of articles	Total publications
1	Duke University	8	281,019	1	United States	50	16,963,549
2	University of Reading	5	65,143	2	United Kingdom	15	5,089,262
3	The University of North Carolina	5	234,900	3	Australia	10	2,146,519
4	Henley Business School	5	3,630	4	India	9	3,341,068
5	University of KwaZulu-Natal	4	63,953	5	South Africa	9	489,472
6	University of Toronto	3	503,236	6	Canada	8	2,575,484

7	New York University	3	264,475	7	Indonesia	6	447,794
8	National Taiwan University	3	170,024	8	Pakistan	5	371,531

Just below Duke, three institutions each produced five adaptive leadership publications, including the University of Reading, Henley Business School in the UK, and the University of North Carolina in the U.S. This grouping reflects two main research orientations, namely a business and management focus at Henley and Reading, and a broader interdisciplinary approach at UNC. Henley Business School's contribution is particularly noteworthy, as its relatively modest total output of 3,630 publications points to a strong specialization in leadership studies.

The University of KwaZulu-Natal in South Africa, with 4 articles, adds an important geographic and thematic dimension by likely applying adaptive leadership to postcolonial and developmental contexts such as social, educational, or governmental transformation. Its presence underscores the relevance of adaptability in transitional settings. In addition, the University of Toronto, New York University, and National Taiwan University each contributed 3 articles, reflecting interest in adaptive leadership within major global research hubs, though not always as a central focus.

At the country level, the United States leads with 50 publications, more than triple the output of the United Kingdom in second place with 15. The vast U.S. research base of over 16 million publications underscores that adaptive leadership has primarily developed within American academic, professional, and policy contexts, particularly in relation to crisis leadership, systems thinking, and executive development.

The United Kingdom ranks second with 15 publications, consistent with contributions from the University of Reading and Henley Business School, reflecting a management and organizational change orientation rooted in business education. Australia follows with 10 publications, linked to active research in leadership, public service reform, and education. India and South Africa each contribute 9 publications, representing key Global South perspectives and highlighting the growing relevance of adaptive leadership in governance, health systems, and institutional reform.

Canada with 8 publications, Indonesia with 6, and Pakistan with 5 further illustrate the global reach of adaptive leadership research. These contexts often face complex, multi-layered leadership challenges that make adaptive frameworks especially relevant. In Indonesia, studies may focus on decentralized governance and educational leadership, while in Pakistan the emphasis appears on institutional resilience, reform, and leadership in constrained civil service environments.

In summary, while the United States and United Kingdom dominate both institutional and national rankings, adaptive leadership research is also emerging in South and Southeast Asia and Africa. This trend highlights opportunities for cross-cultural validation and contextual adaptation of the theory. The growing diversification of research geographies indicates a broader recognition of adaptive leadership as a valuable framework for addressing region-specific challenges, such as governance complexity, organizational resilience, and social transformation.

Table 4. The Most Cited Articles on Adaptive Leadership (2010–May 2025)

Rank	Document title	Authors	Source	Year	Citations
1	Adaptive leadership and the practice of medicine: A complexity-based approach to reframing the doctor-patient relationship	Thygeson, M., Morrissey, L., Ulstad, V. [31]	Journal of Evaluation in Clinical Practice, 16(5), pp. 1009–1015	2010	62
2	Strategic information provision and experiential variety as tools for developing adaptive leadership skills	Nelson, J.K., Zaccaro, S.J., Herman, J.L. [32]	Consulting Psychology Journal, 62(2), pp. 131–142	2010	28
3	Applying the principles of adaptive leadership to person-centred care for people with complex care needs: Con-	Kuluski, K., Reid, R.J., Baker, G.R. [33]	Health Expectations, 24(2), pp. 175–181	2021	27

	siderations for care providers, patients, caregivers and organizations				
4	Building health services in a rapidly changing landscape: Lessons in adaptive leadership and pivots in a Covid-19 remote monitoring program	Laur, C.V., Agarwal, P., Mukerji, G., Goulbourne, E., Baranek, H., Pus, L., Bhatia, R.S., Martin, D., Bhattacharyya, O. [19]	Journal of Medical Internet Research, 23(1), e25507	2021	23
5	Negotiating service learning through community engagement: Adaptive leadership, knowledge, dialogue and power	Preece, J. [34]	Education as Change, 20(1), pp. 104–125	2016	23
6	Adaptive leadership in academic libraries	Wong, G.K.W., Chan, D.L.H. [35]	Library Management, 39(1-2), pp. 106–115	2018	17
7	Agility in adversity: Integrating mindfulness and principles of adaptive leadership in the administration of a community mental health center	Raney, A.F. [36]	Clinical Social Work Journal, 42(3), pp. 312–320	2014	17
8	Adaptive leadership of doctors during Covid-19	Santra, S., Alat, P. [37]	Leadership in Health Services, 35(2), pp. 246–266	2022	15

Table 4 highlights the eight most cited articles on adaptive leadership between 2010 and May 2025, offering insight into the field's intellectual trajectory, thematic evolution, and areas of greatest impact.

The most cited article, “Adaptive leadership and the practice of medicine: A complexity-based approach to reframing the doctor-patient relationship” by [31], with 62 citations, is regarded as a seminal contribution. It underscores the limitations of traditional hierarchical models in medicine and reframes medical leadership through complexity theory. The study demonstrates how adaptive leadership fosters more relational, collaborative, and reflective practices in high-stakes professional settings.

A decade after its initial application in medicine, adaptive leadership in healthcare has expanded from rethinking the doctor-patient relationship to organizational, policy, and systems-level challenges. Based on [33] illustrate this shift by applying adaptive leadership to integrated care, engaging multidisciplinary teams, caregivers, and institutional frameworks. In this context, adaptive leadership supports not only uncertainty management but also collaborative decision-making and person-centered service delivery.

This evolution is further demonstrated by studies such as [19, 37], which examine adaptive leadership in real-time crisis response during the Covid-19 pandemic. Leadership shifted from hierarchical command to distributed, agile practices requiring rapid learning, innovation, and interprofessional collaboration. Adaptive leadership thus became critical for both organizational survival and continuity of services under volatile conditions.

Based on [34] explores adaptive leadership through community engagement and service learning in education, linking it to dialogue, power, and knowledge exchange between universities and communities. This approach shifts focus from individual skills to collective, participatory leadership processes. Similarly, [35] examine adaptive leadership in academic libraries, showing its relevance in navigating technological change, evolving stakeholder expectations, and user needs. These studies indicate that adaptive leadership supports both crisis management and gradual transformation in stable, service-oriented institutions [38].

The second most cited article [32], examines the development of adaptive leadership within individuals, highlighting how experiential variety and information provision foster adaptive capacity. Adaptive leadership is framed as a set of learnable competencies rather than a formal position, bridging theory and leadership

development practice for educators, consultants, and HR professionals. Similarly, [36] integrates mindfulness with adaptive leadership in a community mental health center, emphasizing emotional regulation alongside complexity management. These studies highlight an emerging focus on psychological agility as a complement to strategic and procedural leadership skills.

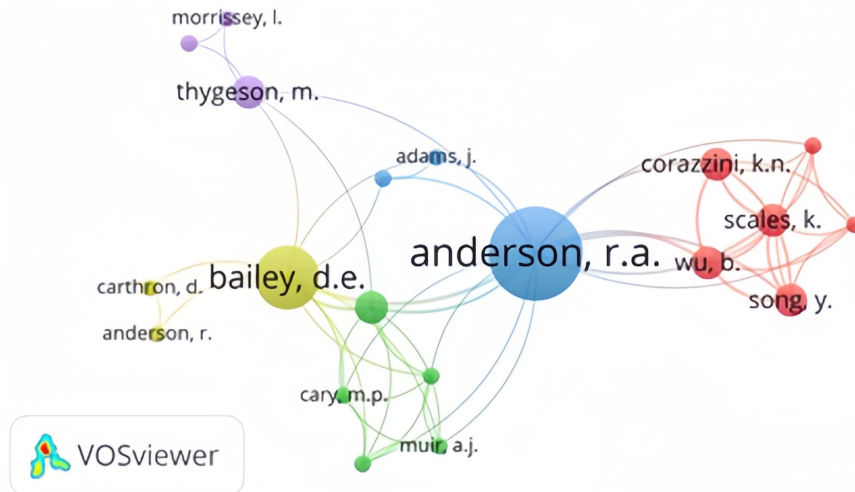


Figure 2. Authors Collaboration in Adaptive Leadership Research

Figure 2 depicts the author collaboration network in adaptive leadership research, highlighting key contributors and their connections. Anderson, R.A. (University of North Carolina at Greensboro), Bailey, D.E. (Duke University), Adams, J.A. (UNC Greensboro), Scales, K. (Paraprofessional Healthcare Institute), and Thygeson, M. (Adaptive Health, Minnesota) emerge as central nodes. Anderson's larger node size reflects higher productivity and centrality in co-authorship, emphasizing her pivotal role in the field. These collaboration clusters suggest the influence of institutional affiliations and shared research agendas in shaping scholarly communities.

Anderson, R.A. has made notable contributions through the Adaptive Leadership Framework for Chronic Illness (ALFCI), which adapts Heifetz's principles from business to healthcare. The framework distinguishes between technical and adaptive challenges and promotes collaborative patient-provider partnerships, enabling patients to respond effectively to complex health changes. This work has significantly advanced both the theoretical and practical understanding of adaptive leadership in complex healthcare systems.



Figure 3. Key Themes and Trends in Adaptive Leadership Research

The trajectory of adaptive leadership research from 2010 to May 2025 reveals a dynamic interplay between theory, context, and global exigency, marking a progressive deepening of both conceptual frameworks and applied domains. Rather than remaining confined to abstract theorization, adaptive leadership has increasingly been contextualized in response to real-world disruptions and systemic challenges (see Figure 3).

4.1. Crisis as Catalyst: Health Care, Mindfulness, and the Human Core of Leadership (Pre-2020–2021)

During the Covid-19 pandemic, adaptive leadership shifted from theory to a practical imperative, especially in healthcare, where leaders faced rapid, high-stakes decisions [39]. Unlike technical leadership, adaptive leadership requires managing uncertainty, surfacing conflict, and engaging teams in learning under pressure [19]. Research highlighted the cognitive and emotional demands of this approach, leading to the integration of mindfulness, emphasizing presence, emotional regulation, and non-reactivity [40]. Additionally, adaptive leadership has been reframed through motivational theory and decision-making science, recognizing that effective leadership depends on mobilizing intrinsic motivation, collective problem-solving, and navigating emotionally and socially complex decisions [41, 42].

4.2. From Reaction to Transformation: Learning and Change Management (2021–2022)

As the immediate crises of the pandemic gave way to long-term institutional transformation, research on adaptive leadership shifted from survival to adaptive renewal. Studies increasingly examined its role in organizational learning and change management, particularly in education, nonprofit governance, and public policy [43]. Scholars linked adaptive leadership to double-loop learning, highlighting the need to question and reconstruct underlying norms and systems [44]. Leaders became cultivators of learning cultures, capable of reshaping identity and mission [2], positioning adaptive leadership as a meta-competency that integrates systems thinking [3], emotional intelligence [2], political acumen, and continuous development [45]. Adaptive leaders anticipate trends, challenge norms, and foster innovation for both themselves and their teams.

4.3. The Post-Crisis Reframing: Agility, Mental Resilience, and the Rise of Psychosocial Leadership (2022–2024)

From 2022 to 2024, adaptive leadership research shifted toward human adaptability within systems, emphasizing agility as a behavioral orientation linked to flexibility, rapid learning, and decentralized authority [46, 47]. Studies highlighted the psychological demands of adaptive work, including emotional labor, vulnerability, and prolonged exposure to tension [2, 48]. This prompted exploration of intersections with mental health, trauma-informed leadership, and resilience science, framing leaders as containers of organizational anxiety and ambiguity [49, 50]. Attention also turned to the shadow side of adaptive leadership, examining burnout, emotional exhaustion, and ethical limits, underscoring the need for equitable and compassionate approaches to leading change [51].

4.4. Toward Integration: Emotional Intelligence, Commitment, and Technological Disruption (Up to 2024)

By 2024, adaptive leadership research had integrated individual capabilities, relational dynamics, and systemic imperatives. Emotional intelligence emerged as a key enabler, supporting leaders in reading emotional climates, regulating responses, and fostering psychological safety [52]. Studies linked emotionally intelligent adaptive leadership to higher follower engagement and commitment [53–55]. Simultaneously, technological innovation and AI-driven workplace changes emphasized digital fluency, requiring leaders to anticipate disruption, facilitate sense-making across digital-physical boundaries, and drive innovation [5]. The adaptive leader is thus positioned as both a catalyst for transformation and a steward of human dignity in complex, evolving systems [56].

5. MANAGERIAL IMPLICATIONS

The findings of this study offer actionable insights for managers and organizational leaders operating in complex, uncertain, and rapidly changing environments. Adaptive leadership emphasizes flexibility, learning agility, and the ability to mobilize teams in response to dynamic challenges. Managers are encouraged to cultivate organizational cultures that support experimentation, continuous learning, and cross-functional collaboration. Strengthening these adaptive capabilities enables leaders to better anticipate disruptions, make informed decisions under pressure, and foster resilience across organizational levels.

Furthermore, the study highlights the importance of developing emotional intelligence and digital adaptability as key competencies in modern leadership. Managers should invest in leadership development programs that integrate adaptive thinking, digital literacy, and crisis management skills. By aligning strategic initiatives with adaptive leadership principles, organizations can enhance their capacity to respond effectively to Volatility, Uncertainty, Complexity, and Ambiguity (VUCA), thereby improving long-term sustainability and competitive advantage.

6. CONCLUSION


This study offers a comprehensive synthesis of adaptive leadership research using a combined systematic literature review and bibliometric analysis. Findings highlight the growing relevance of adaptive leadership as a strategic response to volatility, uncertainty, complexity, and ambiguity (VUCA) across healthcare, education, business, and public governance. Bibliometric analysis shows increased scholarly attention, particularly after global disruptions such as the Covid-19 pandemic, identifying key authors, institutions, and journals as both intellectual anchors and emerging contributors. Thematically, research has progressed from conceptual exploration to include psychological resilience, emotional intelligence, digital transformation, and inclusive change management. This study makes significant contributions to both the theoretical and practical understanding of adaptive leadership. By integrating systematic literature review and bibliometric analysis, it consolidates fragmented research and clarifies key constructs, competencies, and conceptual boundaries. Findings reaffirm foundations in complexity theory, systems thinking, and learning theory, while highlighting underexplored links with emotional intelligence, resilience, and psychological safety. The study also identifies a gap in global representation, particularly from non-Western contexts, offering opportunities for future research to localize and contextualize adaptive leadership across diverse cultural and institutional settings.


Practically, this research provides actionable insights for leaders, educators, and policymakers facing complex and uncertain environments. Adaptive leadership enables engagement with stakeholders to address systemic challenges, foster collective learning, and sustain change beyond technical solutions. Core competencies such as diagnosing system dynamics, managing disequilibrium, and promoting distributed ownership are applicable in contexts like crisis response, digital transformation, and institutional reform. The growing focus on trauma-informed leadership, mental resilience, and ethical adaptation underscores the need for leadership that is both agile and empathetic. Organizations can strengthen adaptive capacity by integrating these principles into training, coaching, and organizational culture, while educational institutions and public agencies can prepare leaders to act systemically, collaboratively, and adaptively.

This study has several limitations. First, the literature search was restricted to the Scopus database and English-language publications, potentially excluding relevant studies in other languages or indexed elsewhere, which may limit representation of non-Western perspectives. Second, while bibliometric analysis offers objective measures of scholarly influence and trends, it cannot fully capture theoretical nuance or contextual complexity. Reliance on citation patterns and keyword co-occurrence may overlook emerging but significant ideas. Future research should address these limitations by expanding data sources (such as Web of Science or Google Scholar) to include multilingual and regionally grounded studies. Cross-cultural comparisons can deepen understanding of how adaptive leadership is conceptualized and practiced across diverse sociopolitical and institutional contexts. Longitudinal and mixed-method studies are needed to assess real-world applications and outcomes, particularly during crises or organizational transformation. Additionally, examining intersections with ethics, mental well-being, and digital innovation can advance a more holistic and inclusive theory of adaptive leadership responsive to 21st-century challenges.

7. DECLARATIONS

7.1. About Authors

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7.2. Author Contributions

Conceptualization: UU; Methodology: SU; Software: UU; Validation: SU and VZ; Formal Analysis: VZ and NC; Investigation: UU; Resources: SU; Data Curation: UU; Writing Original Draft Preparation: UU and SU; Writing Review and Editing: UU and VZ; Visualization: VZ and NC; All authors, UU, SU, VZ, and NC, have read and agreed to the published version of the manuscript.

7.3. Data Availability Statement

The data presented in this study are available on request from the corresponding author.

7.4. Funding

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7.5. Declaration of Conflicting Interest

The authors declare that they have no conflicts of interest, known competing financial interests, or personal relationships that could have influenced the work reported in this paper.

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