



Systematic Literature Reviews: The Influence of Digital Leadership on Digital Transformation

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Abstract. This research aims to examine the influence of digital leadership on digital transformation through the Systematic Literature Review (SLR) method. In the era of rapid digital transformation, digital leadership plays a key role in integrating digital technology into all aspects of business and improving operational efficiency, innovation, and competitiveness. This study identifies current research trends and gaps by reviewing 17 articles published in reputable journals from 2020-2024. The results show that digital leadership directly and indirectly influences organizational performance, mainly through mediating digital culture and employee digital capabilities. In addition, organizational agility driven by digital transformational leadership and digital strategy consensus is important in supporting successful digital transformation. Despite many significant findings, the study also identified gaps, including a lack of long-term research and research in various geographical and cultural contexts. Based on these findings, it is recommended that future research focus on the long-term impact of digital leadership, digital competency development, and increased collaboration between academics and practitioners to develop more effective and sustainable digital transformation strategies.

Keywords: Digital Leadership, Digital Transformation, Systematic Literature Reviews, Digital Culture, Digital Competencies.

1 Introduction

Digital leadership has emerged as a crucial topic in the era of rapid digital transformation. Digital transformation involves integrating digital technologies into all aspects of a business, leading to fundamental shifts in how organizations operate and create value for customers. In today's highly competitive and dynamic environment, adapting quickly to technological advancements and leveraging digital tools to improve efficiency, innovation, and competitiveness is becoming increasingly essential. Digital leadership, which refers to the ability of leaders to utilize digital technologies to guide their organizations through these transformations, plays a pivotal role in ensuring success.

Several studies emphasize the importance of digital leadership in supporting digital transformation. Kane et al. [1] argue that digital leadership is a key differentiator

between organizations that succeed in digital transformation and those that struggle. Meanwhile, Westerman et al. [2] suggest that leaders in the digital era must develop a clear vision of how technology can help achieve strategic goals. However, digital leadership is not solely about technical expertise—it also involves the ability to inspire and mobilize teams, manage organizational change, and foster a culture of innovation and adaptability. Leaders must understand how technology drives transformation and navigate the risks and challenges associated with digital disruption [3,4].

This systematic literature review (SLR) aims to identify current research trends and gaps in studies examining the influence of digital leadership on digital transformation. Through this review, the study seeks to enhance understanding of how digital leadership supports transformation processes and explore the key factors determining its effectiveness. The primary research questions to be addressed include:

1. What are the major research trends in studies analyzing the impact of digital leadership on digital transformation?
2. What gaps remain in the existing literature on this topic?
3. How do various aspects of digital leadership—such as leadership style, competencies, and change management strategies—influence digital transformation outcomes?
4. What are the main challenges and obstacles leaders encounter when implementing digital leadership?

This study is expected to significantly contribute to the literature by providing a comprehensive overview of research trends and gaps. Given the increasing importance of digital leadership in digital transformation, developing a deeper understanding of this topic can assist both academics and practitioners in formulating more effective leadership strategies [5,6]. Additionally, the findings of this review will offer practical insights for organizations, enabling them to design better training and development programs for future digital leaders. Since digital transformation is a complex and ongoing journey, digital leadership is indispensable in determining its success. Therefore, understanding the relationship between digital leadership and digital transformation is crucial for academic research and has significant real-world implications for organizations in various sectors [7,8,9].

2 Methods

This study employs a Systematic Literature Review (SLR) to systematically identify, examine, evaluate, and interpret relevant research. The SLR process follows a structured approach, beginning with the formulation of research questions, which, in this case, focus on the impact of digital leadership on various variables. To address these research questions, Google Chrome's search engine was utilized alongside <http://garuda.ristekdikti.go.id> for primary data collection and <http://google.scholar.com> for secondary sources.

The feasibility of selected studies was assessed at the inclusion and exclusion criteria stage. The inclusion criteria encompassed research published in high-impact scientific

journals or conferences, written in English or Indonesian, primarily focused on digital leadership and/or digital transformation, and published between 2020 and 2024. Conversely, the exclusion criteria eliminated studies that lacked full access, did not align with the research topic, were published before 2020, or were not peer-reviewed. The identified data were evaluated based on predefined quality assessment criteria at this stage.

The data collection stage involved gathering relevant studies from multiple sources. The study leveraged the Crossref database with the assistance of the Publish or Perish application, using the keyword "digital leadership" to retrieve research articles. Only studies published within the last five years (2020-2024) were included. The data analysis phase then involved examining the collected data to address the research questions and derive conclusions based on the findings.

This study follows the PRISMA Protocol (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) to ensure a rigorous methodology. The primary study selection process was conducted in four stages by PRISMA: identification, screening, eligibility, and inclusion [10] From the collected articles, 54 studies were identified as highly relevant to the research keywords. These were further refined, and the researchers selected 17 articles directly related to the research topic for in-depth review and comprehensive analysis

3 Result and Discussion

Based on the research methodology, thousands of journal articles related to digital leadership, published between 2020 and 2024, were identified. However, for this study, the search was limited to 1,000 articles using the Publish or Perish application. These articles then underwent a rigorous selection and analysis process, ultimately narrowing the focus to 17 articles specifically examining the influence of digital leadership in the digital sector. The selected articles were published in reputable, high-quality international journals, as presented in the following table.

Table 1 . List of the Journal

| No. | Year | Name Journal | Publisher |
|-----|------|--|-------------------------------|
| 1 | 2020 | Journal Management Business | University National Education |
| 2 | 2021 | Information Technology for Development | Information UK Limited |
| 3 | 2021 | Future of Business and Finance | Springer Fachmedien Wiesbaden |
| 4 | 2021 | Digital Transformation Management for Agile Organizations: A Compass to Sail the Digital World | Emerald Publishing Limited |

| No. | Year | Name Journal | Publisher |
|-----|------|--|---|
| 5 | 2021 | 2021 IEEE International Conference on Engineering, Technology, and Innovation (ICE/ITMC) | IEEE |
| 6 | 2021 | Future of Business and Finance | Springer Fachmedien Wiesbaden |
| 7 | 2022 | Navigation Digital Transformation in Management | Routledge |
| 8 | 2023 | Sustainability | MDPI AG |
| 9 | 2023 | Journal of the Knowledge Economy | Springer Science and Business Media LLC |
| 10 | 2023 | Frontiers in Psychology | Frontiers Media SA |
| 11 | 2023 | Journal of Enterprise Information Management | Emerald |
| 12 | 2023 | Journal of Business and Socio-economic Development | Emerald |
| 13 | 2023 | International Journal of Scientific Research and Management | Valley International |
| 14 | 2023 | TEM Journal | Association for Information Communication Technology Education and Science (UIKTEN) |
| 15 | 2023 | Enrichment: Journal of Multidisciplinary Research and Development | International Journal Labs |
| 16 | 2023 | The Management Accountant Journal | The Institute of Cost Accountants of India |
| 17 | 2024 | International Journal of Academic Research in Business and Social Sciences | Human Resources Management Academic Research Society (HRMARS) |

This research emphasizes articles primarily concentrating on digital leadership and its impact on various variables within the digital sector, including digital transformation, digital culture, and employee performance. The details are illustrated in the following table

Based on the research findings, several emerging research trends and gaps have been identified concerning the impact of digital leadership on digital transformation. The selection process resulted in 17 articles published in reputable journals between 2020 and 2024. These studies were released by renowned publishers such as MDPI AG, Springer, and Emerald, addressing the role of digital leadership across various organizational settings and industries. Each article was carefully chosen due to its strong relevance to the research topic and contribution to a deeper understanding of digital leadership's influence.

One of the major trends identified is digital leadership's direct and indirect impact on organizational performance. Research by Shin et al. [11] highlights that digital

leadership positively affects organizational performance in South Korea, with digital culture and employees' digital capabilities acting as mediating factors. This study underscores the significance of mediation factors in obtaining a more comprehensive understanding of digital leadership's effects. Digital culture refers to the values and norms that foster technology integration into daily operations. In contrast, employee digital capabilities relate to the skills and competencies required to utilize technology efficiently. These findings suggest that organizations must cultivate an innovation-driven technological culture and enhance digital skills at all levels to implement digital transformation successfully.

Ly [12] discovered that digital transformational leadership significantly impacts digital transformation by enhancing organizational agility, particularly within the public sector. Digital transformation necessitates major structural and operational shifts, so transformational leadership is critical in steering organizations through these transitions. Organizational agility, the capacity to adapt swiftly and efficiently to change, is becoming increasingly vital in today's dynamic business environment. The study emphasizes that a flexible organizational model is crucial in facilitating digital transformation. Therefore, digital leaders must be capable of driving cultural shifts within organizations while fostering an environment that supports innovation and enables rapid adaptation to market changes.

The characteristics of effective digital leaders have also been a primary focus of recent research. Magesa and Jonathan [13] identified 13 essential traits of successful digital leaders, including managing change effectively and fostering innovation. These characteristics are critical factors in stimulating economic growth and enhancing organizational services in Tanzania. Effective digital leadership extends beyond merely adopting technology; it also encompasses inspiring and motivating teams, strategically implementing change, and establishing a clear vision for the organization's future. These leadership qualities equip leaders with the necessary skills to navigate the complexities and uncertainties often accompanying digital transformation efforts.

Additionally, Turkish [14] underscores the pivotal role of digital leadership in crafting effective business strategies for digital transformation, particularly in areas such as time management and productivity enhancement. A well-structured business strategy must consider the potential of technology to enhance operational efficiency, accelerate innovation in products and services, and improve customer experiences. Strong digital leadership enables organizations to develop and execute strategies that integrate advanced technologies and ensure that the entire organization is adequately prepared for the inevitable changes associated with digital transformation.

Furthermore, the study conducted by Yao et al. [15] revealed that digital strategy consensus is a crucial mediator in the relationship between digital leadership and digital transformation. The degree of consensus regarding digital strategy, which is influenced by organizational diversity, can either enhance or diminish the impact of digital leadership on digital transformation. This consensus reflects the extent of alignment among leaders and employees regarding the objectives and direction of digital initiatives. Organizations tend to execute their digital strategies more successfully when a high level

of agreement is achieved. Conversely, significant differences in opinions or a lack of agreement can create obstacles in the transformation process.

Despite the extensive research on the role of digital leadership in driving digital transformation, several research gaps that require further exploration remain. One of the most significant gaps pertains to the long-term impact of digital leadership on organizational performance. While many existing studies focus primarily on short-term effects, the long-term consequences of digital leadership in sustaining digital transformation remain largely unexplored. More longitudinal studies are necessary to examine how digital leadership influences the ongoing success of digital transformation and how organizations can sustain the advantages derived from this transformation over time.

Additionally, most research has been conducted in advanced economies such as South Korea and Europe, leading to a limited perspective on digital leadership. Further research must be conducted across diverse geographical and cultural settings to gain a more holistic and globally applicable understanding of digital leadership's impact. Investigating developing nations and various industry sectors could yield valuable insights into how digital leadership is applied and adapted in different organizational environments. This expansion is crucial for ensuring that research findings are applicable across different business landscapes, making implementing effective digital leadership strategies in varying operational and cultural contexts easier.

Overall, the results of this study indicate that digital leadership plays a crucial role in facilitating digital transformation. However, numerous aspects remain unexplored, necessitating further investigation into how digital leadership influences transformation across various organizational contexts. Therefore, additional research is essential to address the existing gaps and further enhance the literature on digital leadership and digital transformation. Expanding research in this area will enable academics and practitioners to develop more effective and sustainable strategies for implementing digital leadership and transformation initiatives within their organizations

4 Conclusion

This research employs the Systematic Literature Review (SLR) method to examine the influence of digital leadership on digital transformation. By analyzing 17 articles published in reputable journals between 2020 and 2024, the study finds that digital leadership is crucial in driving digital transformation across various organizational contexts. The key findings highlight digital leadership's direct and indirect impacts on organizational performance, the significance of organizational agility shaped by digital transformational leadership, and the characteristics of effective digital leaders in fostering innovation and change. Furthermore, the study identifies that digital strategy consensus serves as a critical mediator, reinforcing the influence of digital leadership on digital transformation.

Despite the substantial body of research on this topic, several gaps remain. One notable gap is the lack of long-term studies assessing digital leadership's sustained impact on organizational performance. Additionally, most existing research is concentrated in developed countries, necessitating further exploration across diverse geographic and

cultural contexts to develop a more comprehensive understanding of digital leadership's role in transformation.

Based on the findings and the identified research gaps, several recommendations for future studies and practical applications are proposed as follows:

1. **Long-Term Research:** It is essential to conduct longitudinal studies to assess the long-term impact of digital leadership on the sustainability of digital transformation. Such research should investigate how digital leadership affects organizational performance over extended periods and explore strategies that enable organizations to maintain the sustained advantages gained from digital transformation.
2. **Studies in Diverse Geographical and Cultural Contexts:** Further studies should be carried out across various geographical regions and cultural settings to develop a more comprehensive perspective on the effects of digital leadership. Investigating digital leadership in developing nations and different industrial sectors would offer valuable insights into how organizations implement and adapt digital leadership strategies in distinct and challenging environments.
3. **Enhancing Digital Competencies:** Organizations must prioritize the development of digital competencies among their leaders. Structured training and development programs should be implemented to strengthen digital capabilities, enhance leaders' ability to manage change, and foster an organizational culture that encourages innovation and digital adaptability.
4. **Building Digital Strategy Consensus:** Organizations should strive to establish a unified digital strategy consensus among their leaders and employees. A strong alignment in strategic vision will contribute to successfully executing digital strategies and minimize barriers arising from significant disagreements or diverging viewpoints regarding digital transformation initiatives.
5. **Collaboration Between Academia and Industry Practitioners:** Future research should emphasize closer partnerships between academic researchers and practitioners. Such collaborations will facilitate the development of practical, research-driven solutions that effectively address real-world challenges faced by organizations navigating digital transformation. Together, academics and industry leaders can bridge the gap between theoretical knowledge and practical application, ensuring that digital leadership research remains relevant and actionable.

By implementing these recommendations, it is expected that research and practice in digital leadership will become more effective in supporting sustainable digital transformation while also contributing to enhancing organizational performance across various sectors and regions.

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