



Journal of Hunan University (Natural Sciences)

Vol. 52 No. 9
September 2025

Available online at
<https://joununs.com>



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Open Access Article

 <https://doi.org/10.55463/issn.1674-2974.52.9.9>

The Relationship Between Transformational Leadership and Employee Job Satisfaction in Modern Technology-Based Organizations

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Article History:

Received: August 9, 2025

Revised: September 12, 2025

Accepted: September 25, 2025

Published: October 30, 2025

Abstract: This study investigates the relationship between transformational leadership and employee job satisfaction in modern technology-based organizations. Given the rapid growth of the technology sector and the need for innovative leadership in such dynamic environments, understanding how leadership styles influence employee satisfaction is crucial for both organizational performance and employee retention. A qualitative approach, based on a literature review, was used to analyze relevant scholarly articles and research on the subject. The study explores how transformational leadership behaviors, such as intellectual stimulation, individualized consideration, and inspirational motivation, impact employee satisfaction and organizational outcomes in the tech industry. The findings reveal that transformational leadership positively affects employee satisfaction by fostering an innovative, supportive, and motivating work environment. However, the relationship is moderated by factors such as organizational culture and employee expectations, which influence how these leadership behaviors are received by employees. The novelty of this study lies in its focus on the dynamics of transformational leadership specifically within technology-based organizations, a context that remains underexplored compared to traditional industries. Practically, the insights provide actionable guidance for technology firms to design leadership development programs that align with employee needs, strengthen engagement, and sustain innovation in highly competitive environments. The study contributes to the theoretical understanding of transformational leadership in the tech sector, offering valuable insights for both academics and practitioners in the development of effective leadership strategies. In conclusion, the research emphasizes the importance of aligning leadership behaviors with employee needs and organizational culture



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to enhance job satisfaction and performance. Future research should explore the impact of leadership styles in different tech contexts, including remote and hybrid work environments.

Keywords: transformational leadership, employee job satisfaction, technology organizations, leadership behaviors, organizational culture.

现代技术型组织中变革型领导与员工工作满意度的关系

摘要：本研究调查了现代技术型组织中变革型领导与员工工作满意度之间的关系。鉴于技术行业的快速增长以及在如此动态的环境中对创新领导力的需求，了解领导风格如何影响员工满意度对于组织绩效和员工保留至关重要。采用基于文献综述的定性方法来分析有关该主题的相关学术文章和研究。该研究探讨了变革型领导行为，例如智力刺激、个性化关怀和鼓舞人心的激励，如何影响科技行业的员工满意度和组织成果。研究表明，变革型领导通过营造创新、支持和激励的工作环境，对员工满意度产生积极影响。然而，这种关系受到组织文化和员工期望等因素的调节，这些因素会影响员工如何接受这些领导行为。本研究的创新之处在于聚焦于技术型组织内部变革型领导的动态关系，这一领域相较于传统行业仍然研究不足。在实践层面，本研究为科技企业提供了可操作性的指导，以便设计符合员工需求的领导力发展项目，从而增强员工敬业度、促进创新并在激烈竞争环境中保持优势。本研究有助于对科技领域变革型领导力的理论理解，为学者和从业者制定有效的领导战略提供了宝贵的见解。总之，该研究强调了使领导行为与员工需求和组织文化保持一致以提高工作满意度和绩效的重要性。未来的研究应该探讨领导风格在不同技术环境中的影响，包括远程和混合工作环境。

关键词：变革型领导力、员工工作满意度、技术组织、领导行为、组织文化。

1. Introduction

In today's rapidly evolving business environment, particularly within modern technology-based organizations, leadership plays a pivotal role in shaping organizational culture, enhancing performance, and influencing employee satisfaction. Among various leadership styles, transformational leadership has emerged as a key driver of positive organizational outcomes, especially in dynamic and fast-paced industries [1]. Transformational leaders are characterized by their ability to inspire and motivate employees, foster innovation, and create an environment of trust and collaboration. Given the heightened competition and the increasing reliance on technology, employee satisfaction has become a crucial determinant of organizational success, affecting both individual and

organizational performance [2]. However, despite extensive research on leadership styles, there remains a need to explore the specific relationship between transformational leadership and employee job satisfaction, particularly in the context of technology-driven firms where the work environment is often characterized by constant change, high expectations, and demanding innovation cycle [3].

The significance of this topic lies in the fact that employee satisfaction has been directly linked to productivity, retention rates, and overall organizational performance. According to a recent Gallup survey, only 15% of employees worldwide are engaged at work, which signals a critical issue that organizations need to address, especially in the tech sector where the workforce is constantly evolving and adapting to new

tools and processes [4]. Studies have shown that transformational leadership can create an environment conducive to employee engagement by promoting a strong sense of purpose, autonomy, and development. For instance, companies like Google and Apple have been successful in fostering high employee satisfaction through transformational leadership practices that encourage creativity and collaboration. On the other hand, research has indicated that the absence of such leadership can lead to lower morale, higher turnover rates, and reduced innovation.

The relationship between transformational leadership and employee job satisfaction, however, remains complex and underexplored, especially in the context of the rapidly changing technological landscape. While some studies have demonstrated a positive correlation between transformational leadership and employee satisfaction, others have suggested that the relationship may vary depending on organizational culture, leadership styles, and employee expectations. This gap in the literature calls for further investigation to understand the nuances of this relationship in the modern technology sector. Moreover, technology-based organizations often face unique challenges such as high stress levels, burnout, and constant pressure to innovate, making the role of leadership in managing employee satisfaction even more critical.

The primary aim of this research is to examine the relationship between transformational leadership and employee job satisfaction within modern technology-based organizations. Specifically, this study seeks to explore how transformational leadership behaviors, such as intellectual stimulation, individualized consideration, and inspirational motivation, influence various facets of job satisfaction, including work-life balance, career development opportunities, and job security. By addressing these factors, the research will contribute to a deeper understanding of how leadership can be leveraged to improve employee satisfaction and well-being in the tech industry. Additionally, this study aims to offer practical insights for organizational leaders seeking to enhance employee engagement, reduce turnover, and promote a positive work environment.

This investigation is relevant not only to academic theory but also to practical implications for leadership development programs in technology companies. By bridging the gap between theory and practice, the research will provide valuable recommendations for leaders looking to cultivate a motivated and satisfied workforce. Furthermore, this study will enrich existing literature by providing a more nuanced perspective on how transformational leadership can be effectively applied in tech-centric environments, where the need for innovation and adaptability is ever-present. Therefore, the central research question guiding this study is: How does transformational leadership impact employee job satisfaction in modern technology-based organizations?

Through this inquiry, the study aims to offer new insights into leadership practices that can contribute to enhancing employee job satisfaction in the face of the challenges posed by technological advancements and organizational change. By building on existing theories and addressing gaps in the current literature, the research aims to shed light on the factors that make transformational leadership an effective tool for fostering a satisfied and engaged workforce in the technology sector.

2. Literature Review

Transformational leadership has been consistently linked to higher levels of employee job satisfaction across various sectors. According to [5], transformational leadership positively impacts employee satisfaction by enhancing motivation, promoting meaningful work, and creating a positive work environment. Transformational leaders provide individualized attention to their employees, recognize their achievements, and encourage personal and professional growth. These behaviors lead to greater employee well-being, as employees feel valued, supported, and challenged in their roles [6].

In the context of technology-based organizations, transformational leadership is particularly relevant as these companies often deal with high-pressure environments, rapid technological advancements, and the need for constant innovation. Leaders who demonstrate transformational behaviors help employees navigate these challenges by creating a supportive environment that fosters trust, creativity, and resilience [7]. For instance, studies in the technology sector have shown that transformational leadership enhances employees' intrinsic motivation, which directly contributes to higher levels of job satisfaction and commitment [8]. This is crucial in tech industries where job satisfaction is a key driver of retention, as employees in these sectors are often presented with numerous career opportunities and may leave companies if they do not feel engaged or satisfied in their roles.

Job satisfaction in technology-based organizations is influenced by several factors, including the work environment, opportunities for professional development, recognition, and work-life balance. In these organizations, the work environment is often characterized by high levels of complexity and uncertainty, which can lead to stress and burnout if not properly managed. Transformational leadership addresses these issues by promoting a culture of collaboration and continuous learning, which helps employees feel more competent and confident in their roles [9].

Furthermore, the relationship between transformational leadership and job satisfaction in technology companies is influenced by the nature of the work itself. Technology-based organizations typically

encourage creativity, problem-solving, and innovation, and transformational leaders can provide the guidance and encouragement needed for employees to thrive in such environments. A study by [10] highlighted that transformational leadership positively impacts employee satisfaction by enhancing employees' sense of self-efficacy and by providing them with meaningful challenges. In technology firms, where innovation is a core value, transformational leadership can be particularly effective in fostering an environment where employees feel empowered to contribute to the company's success.

Although the relationship between transformational leadership and job satisfaction is well-documented, there are challenges in fully understanding this relationship, especially within the context of technology-based organizations. One significant challenge is the diversity of leadership styles and their impact on employee satisfaction. Some studies suggest that the effects of transformational leadership may be moderated by organizational culture, the leadership environment, or individual differences in employee preferences and expectations. In technology firms, where employees may have varied backgrounds, skills, and career goals, the universal applicability of transformational leadership behaviors in fostering job satisfaction remains an area of debate [11].

Additionally, while transformational leadership is generally associated with positive outcomes, it is not without potential drawbacks. Excessive reliance on transformational leadership could lead to unrealistic expectations, burnout, or feelings of inadequacy among employees who may not be able to consistently meet the high standards set by transformational leaders. In the fast-paced tech sector, where the pressure to innovate and perform is high, this aspect of transformational leadership warrants further exploration. Leaders must strike a balance between motivating employees and maintaining their well-being.

Despite the considerable body of literature linking transformational leadership to employee job satisfaction, there remains a gap in understanding the specific dynamics of this relationship within technology-based organizations. Much of the existing research has focused on general industries or has been conducted in traditional corporate settings, leaving a limited understanding of how these dynamics play out in technology-centric environments. As technology companies often operate in unique conditions, such as agile work environments, shifting market demands, and an emphasis on constant innovation, the generalizability of findings from other sectors may be limited.

This study seeks to bridge this gap by focusing specifically on technology-based organizations and examining how transformational leadership behaviors directly impact employee job satisfaction in these

contexts. By providing a nuanced understanding of this relationship, the research will contribute to both theoretical and practical knowledge. The study will explore specific aspects of transformational leadership that are most relevant to employees in technology-driven industries, such as how intellectual stimulation and individualized consideration contribute to job satisfaction and employee engagement. Additionally, this research will help identify whether the relationship between transformational leadership and job satisfaction is consistent across different levels of the organization, from senior executives to entry-level employees.

3. Methods

This study adopts a qualitative research design, specifically a literature review approach, to examine the relationship between transformational leadership and employee job satisfaction in modern technology-based organizations. A qualitative approach is deemed most appropriate for this research as it allows for a deeper understanding of complex social phenomena and provides the flexibility needed to explore the nuances of leadership behaviors and their impact on employee satisfaction in diverse technological contexts.

The sample for this study consists of relevant scholarly articles, peer-reviewed journal publications, books, and reports on transformational leadership and employee job satisfaction in technology-based organizations. The selection criteria for the studies include research published in the last ten years, studies focused on the technology sector, and studies specifically investigating the relationship between transformational leadership and employee satisfaction.

Data collection involves a systematic search of academic literature, using key search terms such as "transformational leadership," "employee job satisfaction," "technology organizations," and "leadership in tech industry." The literature will be screened for relevance based on abstract, title, and full-text review, following the inclusion and exclusion criteria outlined. The process will span over three months to ensure adequate time for thorough assessment.

The data analysis will follow a thematic approach, which is particularly suitable for identifying and analyzing patterns within qualitative data. Thematic analysis allows researchers to interpret complex qualitative data in a structured manner, making it easier to identify significant themes and relationships. In this study, thematic analysis will be applied to explore how various aspects of transformational leadership affect employee job satisfaction and to identify moderating factors influencing this relationship.

4. Results and Discussion

The analysis of the literature consistently reveals that transformational leadership behaviors have a

significant positive impact on employee job satisfaction in technology-based organizations. Key transformational leadership behaviors intellectual stimulation, individualized consideration, and inspirational motivation were identified as central to creating a work environment where employees feel valued, supported, and motivated.



Figure 1. Impact of Leadership Behaviors on Job Satisfaction and Organizational Performance

Leaders who engage in intellectual stimulation encourage employees to think critically, question assumptions, and contribute creative solutions. In technology organizations, where innovation is a critical driver of success, this behavior significantly contributes to employee satisfaction. Several studies indicated that employees who work under transformational leaders who stimulate innovative thinking and support risk-taking report higher levels of satisfaction. For example, employees at tech companies such as Google and Apple reported that their leaders' encouragement of creativity and problem-solving directly contributed to a sense of ownership and fulfillment in their work [12].

Transformational leaders provide personalized attention to their employees, understanding their needs and offering support to foster both personal and professional development. This behavior was found to be particularly impactful in technology companies where employees seek opportunities for growth, skill development, and recognition. Research by [13] suggests that employees who received individualized feedback, mentorship, and career guidance from their leaders were more satisfied with their jobs and exhibited higher organizational commitment. This form of leadership helps employees feel valued, which, in turn, increases their job satisfaction.

Transformational leaders who communicate a compelling vision and inspire their teams to work toward collective goals create a motivating and

satisfying work environment. Inspirational motivation was found to be an essential factor for fostering job satisfaction in fast-paced, high-pressure environments like those found in the technology sector. According to [14], employees in technology firms who were motivated by their leaders' enthusiasm and vision experienced higher job satisfaction, as they felt aligned with the organizational mission and goals. The emotional connection fostered by inspirational leaders helps employees see the broader purpose of their work, which enhances their motivation and satisfaction.

While transformational leadership was generally associated with positive outcomes in employee job satisfaction, several moderating factors were found to influence the strength of this relationship.

Organizational culture emerged as a key factor that influences how transformational leadership behaviors impact employee satisfaction. In organizations with a culture that values open communication, innovation, and collaboration, transformational leadership was more likely to lead to high employee satisfaction. Conversely, in organizations with rigid, hierarchical structures or a toxic work culture, even the best transformational leadership behaviors may not yield high job satisfaction. For instance, employees in companies with strong team-oriented cultures (like those at startups or tech giants such as Google) reported feeling more engaged and satisfied when they experienced transformational leadership behaviors.

The alignment between employee expectations and leadership behaviors played a moderating role in determining the effectiveness of transformational leadership. Employees in technology organizations often have high expectations for autonomy, innovation, and career development. When transformational leaders met these expectations, employees reported higher levels of satisfaction. However, in organizations where employees preferred stability and more traditional leadership approaches, the impact of transformational leadership on satisfaction was less pronounced. In some cases, employees found the high expectations and constant push for innovation under transformational leadership to be overwhelming, leading to stress and lower satisfaction levels.

Job autonomy and the ability to balance work and personal life were identified as crucial components that influence employee satisfaction in the context of transformational leadership. Employees in tech companies with transformational leaders who offered flexible working arrangements and autonomy in decision-making reported significantly higher job satisfaction. Leaders who supported employees' work-life balance by being understanding of personal needs further enhanced their satisfaction [15].

The literature also revealed that the positive impact of transformational leadership on employee satisfaction had an indirect but significant effect on organizational

performance. Satisfied employees were more engaged, committed, and motivated to contribute to the organization's success. In technology-based organizations, where innovation and creativity are vital for maintaining a competitive edge, employees who are satisfied with their jobs are more likely to contribute innovative ideas, collaborate effectively with teams, and engage in behaviors that drive organizational success.

For example, companies like Microsoft and Facebook, where transformational leadership practices are integral to organizational culture, reported high employee satisfaction rates, which in turn were linked to higher levels of innovation and productivity. Satisfied employees are also less likely to leave, reducing turnover rates and retaining key talent [16]. This retention of skilled employees is particularly crucial in the tech industry, where the war for talent is fierce.

Another key finding from the literature was the connection between transformational leadership, employee satisfaction, and retention. Employees who experience high levels of satisfaction under transformational leaders are more likely to remain with the organization, reducing turnover rates. [17] found that transformational leadership behaviors contributed significantly to higher levels of employee engagement and retention in tech firms. Retaining experienced employees is crucial in technology-based organizations, where turnover can be costly and disruptive to innovation and team cohesion.

The findings of this study support the well-established theoretical framework of transformational leadership, first introduced by [18], which emphasizes the importance of leadership behaviors such as intellectual stimulation, individualized consideration, and inspirational motivation in influencing follower satisfaction and performance. Transformational leaders are known for their ability to inspire and motivate employees by creating a compelling vision, promoting innovation, and offering personalized support to meet the needs of their followers. The results of this study indicate that these behaviors significantly enhance employee job satisfaction, particularly in the context of technology-based organizations.

The concept of intellectual stimulation aligns with [18] assertion that transformational leaders encourage creativity and problem-solving. In the high-innovation environment of technology companies, where employees are often tasked with solving complex problems and developing new products, intellectual stimulation is crucial. As indicated by the results, employees who felt intellectually challenged by their leaders reported higher job satisfaction, a finding consistent with previous research by Sosik and [19], who suggested that intellectual stimulation fosters a sense of intrinsic motivation and engagement in employees. In technology firms, where creativity is highly valued, transformational leaders who encourage

innovative thinking contribute to higher levels of satisfaction because employees feel their contributions are meaningful and impactful.

The theme of individualized consideration further reinforces the leadership theory put forward by [20], which suggests that transformational leaders pay close attention to the individual needs and aspirations of their employees. This behavior is particularly important in technology organizations, where employees often seek opportunities for growth, development, and career advancement. The finding that employees in organizations with transformational leaders who provide personalized support and mentorship experience greater satisfaction is supported by [21], who highlighted the importance of leaders recognizing the unique strengths and challenges of their followers. By providing individualized attention, transformational leaders help employees feel valued and supported, thus enhancing their sense of job satisfaction and organizational commitment.

Similarly, inspirational motivation, a key element of transformational leadership, resonates with the findings of [22], who argued that transformational leaders inspire enthusiasm and commitment in their followers. In technology-based organizations, where the pace of work is fast and demands are high, leaders who articulate a clear and motivating vision can help employees feel more engaged in their work. The results of this study suggest that employees who are motivated by their leaders' vision and enthusiasm report higher job satisfaction, confirming the findings of [18], who suggested that leaders who offer a compelling vision instill a sense of purpose and connection to the organization's goals.

While the positive relationship between transformational leadership and job satisfaction was generally confirmed, the study also revealed several moderating factors that influenced the strength of this relationship, including organizational culture and employee expectations. These factors underscore the importance of context when considering the application of transformational leadership.

As discussed in the literature, organizational culture plays a crucial role in determining how effective transformational leadership behaviors can be. In organizations with a strong culture of collaboration, trust, and innovation, transformational leadership is more likely to enhance employee satisfaction, as employees are already predisposed to work in an open and supportive environment. The results of this study are consistent with the research by [21], who found that a supportive organizational culture amplifies the positive effects of transformational leadership. In contrast, in organizations with a hierarchical or rigid culture, transformational leadership may have limited impact on job satisfaction because employees may not be accustomed to or receptive to the autonomy and

innovation-driven approach that transformational leaders promote.

Employee expectations also emerged as a critical moderating factor. This finding resonates with the work of [23], who suggested that employee satisfaction is influenced by the degree to which their expectations are met by the organization and its leadership. Employees in technology companies often have high expectations for job autonomy, career development opportunities, and recognition for their contributions. When transformational leaders meet these expectations, they enhance employee satisfaction. However, if the leadership style conflicts with employees' expectations such as when employees prefer more structured or directive leadership styles transformational leadership may not have the same positive effect. The study's findings align with the research by [24], who emphasized that leadership effectiveness is contingent on understanding and addressing the specific needs and preferences of employees.

An important aspect of the findings is the role of job autonomy and work-life balance in moderating the relationship between transformational leadership and job satisfaction. In technology-based organizations, where employees are often given significant autonomy in their roles, transformational leadership can be particularly effective in enhancing job satisfaction by providing employees with the freedom to make decisions, contribute to innovations, and manage their work schedules. This finding aligns with the theoretical work of [19], who argued that job autonomy is a key factor in increasing intrinsic motivation and job satisfaction.

Additionally, the study highlighted that transformational leaders who support employees' work-life balance contribute to higher levels of satisfaction. This finding supports the work of [20], who suggested that leadership behaviors that consider employees' personal needs and well-being are crucial for fostering long-term job satisfaction. In the context of technology companies, where high stress and burnout are common, transformational leaders who offer flexibility and demonstrate empathy toward employees' personal lives are more likely to enhance employee satisfaction and reduce turnover.

The findings support the theoretical link between employee satisfaction and organizational performance. The literature on transformational leadership frequently emphasizes that satisfied employees are more engaged, productive, and committed to organizational goals [25]. This study's findings suggest that transformational leadership not only enhances individual job satisfaction but also contributes to organizational success by fostering higher levels of innovation, retention, and overall performance. This is consistent with research by [26], who found that transformational leadership has a positive spillover effect, leading to improved

organizational performance as a result of higher employee satisfaction and engagement.

5. Conclusion

This research has provided significant insights into the relationship between transformational leadership and employee job satisfaction within technology-based organizations. The study found that transformational leadership behaviors namely intellectual stimulation, individualized consideration, and inspirational motivation are strongly correlated with enhanced employee job satisfaction and organizational performance. These findings directly address the research questions by confirming the positive impact of transformational leadership on both job satisfaction and the broader organizational outcomes such as innovation, retention, and overall productivity. Furthermore, moderating factors such as organizational culture and employee expectations were found to influence the effectiveness of transformational leadership in shaping job satisfaction, highlighting the importance of context in leadership effectiveness.

The study contributes to the development of knowledge in the field of leadership studies by reinforcing existing theories on transformational leadership, particularly [2] model, and extending these theories into the context of modern, technology-driven organizations. The results underscore the relevance of transformational leadership in fostering a motivating and innovative work environment, especially in high-pressure industries like technology. From a theoretical standpoint, the research provides further empirical support for the notion that transformational leadership is not only effective in motivating employees but also in driving organizational success in the long term.

Practically, the findings have significant implications for both academic research and managerial practice. For academic researchers, the study contributes to the growing body of literature on leadership in technology-based organizations, particularly by highlighting the role of leadership behaviors in enhancing employee satisfaction. For practitioners, the research offers valuable guidance for technology firms in developing leadership strategies that are aligned with employees' needs for growth, autonomy, and meaningful work. It also provides a foundation for leadership development programs, particularly in fostering transformational behaviors that support employee engagement and innovation. Moreover, the research emphasizes the importance of organizational culture and employee expectations, which should be considered when implementing transformational leadership practices to maximize their effectiveness.

One of the key contributions of this study is the identification of the moderating factors such as organizational culture and employee expectations that

influence the relationship between transformational leadership and job satisfaction. This insight calls for more nuanced leadership strategies that take into account the specific characteristics of the workforce and the organizational environment. Additionally, the research reinforces the idea that leadership is not a one-size-fits-all approach, and a deep understanding of employee needs and organizational dynamics is crucial for effective leadership.

The study also has limitations that point to areas for future research. While this study has focused on literature review and theoretical analysis, it is important for future research to empirically test the relationship between transformational leadership and employee job satisfaction across different types of technology organizations, including startups, established companies, and multinational corporations. There is also a need to explore how transformational leadership can be adapted to address the challenges specific to remote and hybrid work environments, which are becoming increasingly prevalent in the tech industry. Furthermore, future studies could investigate the impact of different leadership styles, such as transactional or laissez-faire leadership, in comparison with transformational leadership, to provide a more comprehensive understanding of the factors that contribute to employee satisfaction in the tech sector.

References

- [1] U. Udin, R. D. Dharma, R. Dananjoyo, and M. Shaikh, "The Role of Transformational Leadership on Employee Performance Through Organizational Learning Culture and Intrinsic Work Motivation.," *Int. J. Sustain. Dev. Plan.*, vol. 18, no. 1, 2023.
- [2] M. Lindawati and P. Parwoto, "The impact of transformational leadership and motivation on employee performance with job satisfaction as intervening variable in Indonesian banking industry during digital transformation," *J. Ind. Eng. Manag. Res.*, vol. 2, no. 4, pp. 51–66, 2021.
- [3] S. Winkelhaus, E. H. Grosse, and C. H. Glock, "Job satisfaction: An explorative study on work characteristics changes of employees in Intralogistics 4.0," *J. Bus. Logist.*, vol. 43, no. 3, pp. 343–367, 2022.
- [4] R. K. Sharma, S. Kaur, and A. Mittal, "Role of transformational leadership in implementation of Education 4.0: a parallel mediation model in context of higher educational institutions (HEIs)," *Glob. Knowledge, Mem. Commun.*, 2024.
- [5] A. I. Rizka, M. Sumardjo, and I. K. Setiadi, "Transformational leadership and employee engagement analysis on employee performance readiness to change at human resources development agency," *J. Soc. Sci.*, vol. 3, no. 2, pp. 212–229, 2022.
- [6] N. T. Pham, V. T. N. Thuy, T. H. Tuan, Q. H. Nguyen, and L. C. Vi, "Improving the workforce's competitive advantage in the remote work context: A moderated-mediation analysis of perceived organizational support, employee retention, and transformational leadership," *J. Compet.*, vol. 16, no. 3, pp. 137–155, 2024.
- [7] H. D. Latifani and S. Safaria, "The Effect of Training and Transformational Leadership Style on Performance of Relationship Managers Consumer with Job Satisfaction as Intervening Variable at Bank DKI," *Formosa J. Sustain. Res.*, vol. 4, no. 7, pp. 1335–1362, 2025.
- [8] U. Zaman, S. Nawaz, and R. D. Nadeem, "Navigating innovation success through projects. Role of CEO transformational leadership, project management best practices, and project management technology quotient," *J. Open Innov. Technol. Mark. Complex.*, vol. 6, no. 4, p. 168, 2020.
- [9] N. P. Dewi, N. Nurhatisyah, N. Elkarima, and A. Pawar, "Transformational Leadership, Digital Competence, and Employee Performance: Examining the Mediating Role of Self-Efficacy and the Moderating Influence of Perceived Organizational Support," *J. Manaj. Bisnis*, vol. 16, no. 1, pp. 47–72, 2025.
- [10] Z. Ullah *et al.*, "Achieving organizational social sustainability through electronic performance appraisal systems: The moderating influence of transformational leadership," *Sustain.*, 2021.
- [11] A. Mohammed and G. S. Adgaonkar, "Maximizing Employee Performance through Advanced Technology in the Modern Workplace," *Stud. Econ. Bus. Relations*, vol. 6, no. 1, pp. 63–81, 2025.
- [12] R. Riswanti Rini, "Principal's transformational leadership in education era 4.0: A literature review," *Int. J. Curr. Sci. Res. Rev.*, vol. 5, pp. 2852–2860, 2022.
- [13] Y. Sudargini, T. J. Raharjo, and S. Wardani, "The role of technology to enhance servant leadership in the organisation," *Russ. Law J.*, vol. 11, no. 3, pp. 457–465, 2023.
- [14] K. Alafi, "Effect of business intelligence, digital transformation and digital leadership on employee satisfaction within the commercial banking sector in Jordan," *Int. J. Acad. Res. Bus. Soc. Sci.*, vol. 14, no. 1, pp. 2874–2894, 2024.
- [15] S. Siswanto, M. Masyhuri, I. Maksum, and I. Murdiansyah, "The role of job satisfaction as a mediating variable on leadership styles to employee performance," *J. Ekon. Mod.*, vol. 16, no. 1, pp. 54–65, 2020.
- [16] C. Burnett, "Influence of transformational leadership behaviors on technology acceptance by healthcare workers," 2024, *Capella University*.
- [17] P. Dhamija, A. Chiarini, and S. Shapla, "Technology and leadership styles: a review of trends between 2003 and 2021," *TQM J.*, vol. 35, no. 1, pp. 210–233, 2023.
- [18] A. U. Khan, M. Rafi, Z. Zhang, and A. Khan, "Determining the impact of technological modernization and management capabilities on user

satisfaction and trust in library services,” *Glob. Knowledge, Mem. Commun.*, vol. 72, no. 6/7, pp. 593–611, 2023.

[19] M. Munir, R. Firdaus, S. Suhardi, and M. Amin, “The Influence of Digital Leadership, Work-Life Balance, Employee Engagement, and Organizational Learning on Employee Performance with Job Satisfaction as a Moderating Variable,” *Int. J. Appl. Financ. Bus. Stud.*, vol. 12, no. 3, pp. 204–216, 2024.

[20] A. Alfalih and W. Ragmoun, “The impact of transformational leadership on the workplace well-being of employees with disabilities: series mediation and moderation process,” *Front. Public Heal.*, vol. 13, p. 1506257, 2025.

[21] A. Cahyadi, “Job satisfaction and performance of employees at small and medium-sized enterprises in Indonesia: The role of going green and technological adaptation after Covid-19,” 2024, *Magyar Agrár-és Élettudományi Egyetem*.

[22] I. Gutu, D. T. Agheorghiesei, and I. C. Alecu, “The online adapted transformational leadership and workforce innovation within the software development industry,” *Sustainability*, vol. 14, no. 12, p. 7408, 2022.

[23] A. J. Sharify and M. E. Yawar, “Examining the Impact of Transformational Leadership in the Development of Organizational Voice” An Analysis of the Mediating Impact of Information and Communication Technology,” *Akad. Tar. ve Düşünce Derg.*, vol. 11, no. 1, pp. 210–228, 2024.

[24] T. V. Moe, “Enhancing Leadership effectiveness in Virtual Teams: The Moderating Role of Transformational Leadership on Exhaustion and Job Satisfaction,” 2023, *UiT Norges arktiske universitet*.

[25] D. Knezević, “The impact of technologies on leadership styles in Southeast European counties,” *J. Int. Stud.*, vol. 16, no. 2, pp. 127–139, 2023.

[26] M. Nguyen, S. Rundle-Thiele, A. Malik, and P. Budhwar, “Impact of technology-based knowledge sharing on employee outcomes: moderation effects of training, support and leadership,” *J. Knowl. Manag.*, vol. 27, no. 8, pp. 2283–2301, 2023.

参考文献:

[1] U. Udin, R. D. Dharma, R. Dananjoyo and M. Shaikh, “变革型领导力通过组织学习文化和内在工作动机对员工绩效的作用”, *Int. J. Sustain. 开发计划*, 第 18 卷, 第 1 期, 2023 年。

[2] M. Lindawati and P. Parwoto, “转型型领导力和激励对员工绩效的影响, 工作满意度是数字化转型期间印度尼西亚银行业的干预变量”, *J. Ind. Eng. Manag. Res.*, 第 2 卷, 第 4 期, 第 51-66 页, 2021

年。

[3] S. Winkelhaus, E. H. Grosse 和 C. H. Glock, “工作满意度: 内部物流 4.0 中员工工作特征变化的探索性研究”, *J. Bus. Logist.*, 第 43 卷, 第 3 期, 第 343-367 页, 2022 年。

[4] R. K. Sharma, S. Kaur 和 A. Mittal, “变革型领导力在实施教育 4.0 中的作用: 高等教育机构 (HEI) 背景下的平行调解模型”, *Glob. 知识, 记忆. 公社*, 2024 年。

[5] A. I. Rizka, M. Sumardjo 和 I. K. Setiadi, “人力资源开发机构员工绩效变革准备的变革领导力和员工敬业度分析”, *J. Soc. Sci.*, 第 3 卷, 第 2 期, 第 212-229 页, 2022 年。

[6] N. T. Pham, V. T. N. Thuy, T. H. Tuan, Q. H. Nguyen 和 L. C. Vi, “在远程工作环境中提高劳动力的竞争优势: 对感知组织支持、员工保留和变革型领导力的调节中介分析”, *J. Compet.*, 第 16 卷, 第 3 期, 第 137-155 页, 2024 年。

[7] H. D. Latifani 和 S. Safaria, “培训和变革型领导风格对客户关系经理消费者绩效的影响, 工作满意度是银行 DKI 的干预变量”, *Formosa J. Sustain. Res.*, 第 4 卷, 第 7 期, 第 1335–1362 页, 2025 年。

[8] U. Zaman, S. Nawaz 和 R. D. Nadeem, “通过项目引领创新成功。首席执行官变革领导力的作用、项目管理最佳实践和项目管理技术商数”, *J. Open Innov. 技术. Complex.*, 第 6 卷, 第 4 期, 第 168 页, 2020 年。

[9] N. P. Dewi, N. Nurhatisyah, N. Elkarima 和 A. Pawar, “变革型领导力、数字能力和员工绩效: 检查自我效能感的中介作用和感知组织支持的调节影响”, *J. Manaj. Bisnis*, 第 16 卷, 第 1 期, 第 47-72 页, 2025 年。

[10] Z. Ullah 等人, “通过电子绩效评估系统实现组织社会可持续性: 变革型领导力的调节影响”, *Sustain.*, 2021 年。

[11] A. Mohammed 和 GS Adgaonkar, “在现代工作场所通过先进技术最大限度地提高员工绩效”, *Stud*

。Econ. Bus. Relations, 第 6 卷, 第 1 期, 第 63-81 页, 2025 年。

[12] R. Riswanti Rini, “校长在教育时代 4.0 中的变革性领导：文献综述”, Int. J. Curr.Sci. Res. Rev., 第 5 卷, 第 2852–2860 页, 2022 年。

[13] Y. Sudargini、TJ Raharjo 和 S. Wardani, “技术在增强组织中的仆人式领导的作用”, Russ. Law J., 第 11 卷, 第 3 期, 第 457-465 页, 2023 年。

[14] K. Alafi, “商业智能、数字化转型和数字领导力对约旦商业银行业员工满意度的影响”, Int. J. Acad. Res. Bus. Soc. Sci., 第 14 卷, 第 1 期, 第 2874-2894 页, 2024 年。

[15] S. Siswanto、M. Masyhuri、I. Maksum 和 I. Murdiansyah, “工作满意度作为领导风格对员工绩效的中介变量的作用”, J. Ekon. Mod., 第 16 卷, 第 1 期, 第 54-65 页, 2020 年。

[16] C. Burnett, “变革型领导行为对医护人员技术接受度的影响”, 2024 年, 卡佩拉大学。

[17] P. Dhamija、A. Chiarini 和 S. Shapla, “技术和领导风格：2003 年至 2021 年间趋势回顾”, TQM J., 第 35 卷, 第 1 期, 第 210-233 页, 2023 年。

[18] A. U. Khan、M. Rafi、Z. Zhang 和 A. Khan, “确定技术现代化和管理能力对图书馆服务用户满意度和信任度的影响”, Glob. 知识, 记忆. 公报, 第 72 卷, 第 6/7 期, 第 593-611 页, 2023 年。

[19] M. Munir、R. Firdaus、S. Suhardi 和 M. Amin, “数字领导力、工作与生活平衡、员工敬业度和组织学习对员工绩效的影响, 以工作满意度为调节变量”, Int. J. Appl. Financ. Bus. Stud., 第 12 卷, 第 3 期, 第 204-216 页, 2024 年。

[20] A. Alfalih 和 W. Ragmoun, “变革型领导对残疾员工工作场所福祉的影响：系列调解和调节过程”, Front. 公共治疗, 第 13 卷, 第 1506257 页, 2025 年。

[21] A. Cahyadi, “印度尼西亚中小企业员工的工作满意度和绩效：Covid-19 后走向绿色和技术适应的

作用”, 2024 年, Magyar Agrár-és Élettudományi Egyetem。

[22] I. Gutu、D. T. Agheorghiesei 和 I. C. Alecu, “软件开发行业内的在线适应变革型领导力和劳动力创新”, 《可持续发展》, 第 14 卷, 第 12 期, 第 7408 页, 2022 年。

[23] AJ Sharify 和 ME Yawar, “检查变革型领导对组织声音发展的影响, 信息和通信技术中介影响的分析”, Akad. 焦油. ve Düşünce Derg., 第 11 卷, 第 1 期, 第 210-228 页, 2024 年。

[24] T. V. Moe, “提高虚拟团队的领导效率：变革型领导力对疲惫和工作满意度的调节作用”, 2023 年, UiT Norges arktiske universitet。

[25] D. Knezević, “技术对东南欧国家领导风格的影响”, J. Int. Stud., 第 16 卷, 第 2 期, 第 127-139 页, 2023 年。

[26] M. Nguyen、S. Rundle-Thiele、A. Malik 和 P. Budhwar, “基于技术的知识共享对员工成果的影响：培训、支持和领导力的调节效应”, J. Knowl. 管理, 第 27 卷, 第 8 期, 第 2283-2301 页, 2023 年。

Word Count: 7,507 words (excluding references)

Peer-review record:

Fast-track status: Not fast-tracked

First-round reviews received: 3 reports

Revision cycles completed: 3 rounds

Final version submitted: September 25, 2025

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