Research on the relationship between leadership style and team dynamics in high-performance teams

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Abstract. Leadership style profoundly impacts team dynamics in building and maintaining high-performance teams. This article finds through comprehensive research that different leadership styles can stimulate team behavioral, emotional, and cognitive responses, affecting team performance and development. The study used a combination of quantitative analysis and case studies to investigate high-performance teams in different industries and deeply analyzed how leadership style affects team members' participation, innovation ability, and collaboration efficiency. Research has shown that democratic leadership encourages team participation, improves the quality of decision-making processes, and enhances team adaptability. Transformational leadership has a significant impact on driving team innovation and can stimulate the potential of team members. Task-oriented leadership has improved team execution, especially with clear goals and urgent work phases. In addition, situational leadership theory also helps to understand the relationship between leadership style and team dynamics. Leaders should flexibly adjust their leadership strategies based on the team's tasks and development stages.

1 Introduction

Building a high-performance team has become the key to organizational success in today's rapidly changing business environment and complex work tasks. In this context, it is of crucial practical significance and theoretical value to deeply understand team dynamics and how to enhance team collaboration, innovation, and execution capabilities through effective leadership styles. Leadership style directly affects the team's atmosphere and interactions among members and indirectly determines the team's performance and achievements. Therefore, studying the relationship between leadership style and team dynamics in high-performance teams impacts guiding practice and improving theoretical frameworks.

Current research mostly focuses on the impact of leadership style on team performance, but further exploration is needed on how leadership interacts with the dynamics within the team and how to switch leadership styles based on the specific environment of the team. This study aims to fill this gap by analyzing the connections between leadership styles and dynamic elements such as team communication, collaboration, conflict resolution, decision-making process, cohesion, adaptability, and innovation, revealing the key elements of effective leadership in high-performance teams [1].

2 Theoretical Basis and Concept Definition

Leadership style refers to the behavioral patterns and overall attitude towards members exhibited by leaders in team management and leadership processes. Common leadership style classifications include authoritative leadership, democratic leadership, and laissez-faire leadership. Authoritative leadership emphasizes strict command and control, with decisionmaking highly focused on the individual leader and less involving team members' opinions. This style is usually more effective in crisis management and emergency tasks. Democratic leadership emphasizes the participation and consensus of team members, with more communication and discussion between leaders and members. Decision-making requires joint discussion and agreement among team members. Laissez-faire leadership gives members great freedom and rarely intervenes in internal team activities, allowing the team to self-manage and self-drive [2]. As shown in Figure 1:

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^{2.1} Leadership Style Classification and Characteristics

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Fig. 1. Four leadership styles

Transformational leadership and affinity leadership have also been widely discussed in recent years. Transformational leadership encourages innovation and change, focuses on motivating and inspiring team members, and works together with them to pursue higher goals. Affinity leaders value establishing and maintaining interpersonal relationships and focus on creating a harmonious team atmosphere.

2.2 The Connotation and Elements of Team Dynamics

Team dynamics refers to a series of interactions and influences that occur among members within a team. These motivations include communication methods among team members and elements such as decision-making, internal conflict resolution, role division, and work collaboration. The connotation of team dynamics involves team atmosphere, structure and culture, and development stages. Good team dynamics can enhance

team cohesion, promote teamwork, and stimulate creativity and resilience.

2.3 The Measure of Team Performance

The measurement standards for team performance usually include the following aspects: the quantity and quality of task completion, the time efficiency of project completion, the satisfaction and turnover rate of team members, and the satisfaction of customers or stakeholders. When measuring team performance, we can start from the perspective of completing tasks, focusing on whether the team completes goals on time and meets predetermined standards. In addition, it can also be evaluated from the perspective of team operation, such as the effectiveness of internal processes, communication quality, timeliness of conflict resolution, and team adaptability. In performance evaluation, team innovation and learning abilities are often considered to reflect the long-term development potential of the team [3].

3 The Impact of Leadership Style on Team Dynamics

3.1 The Impact of Transformational Leadership on Team Dynamics

Transformational leadership encourages innovation and change, stimulating team members' intrinsic potential and enthusiasm. Transformational leaders often possess foresight, can set inspiring visions, and provide necessary support and encouragement to team members, allowing and encouraging them to challenge the status quo and create new solutions. Under transformational leadership, team dynamics typically manifest as strong creativity adaptability, as the leader's and encouragement and support enhance members' confidence and risk-taking ability. Leaders focus on the development and well-being of each member through personalized care, promote team cohesion, and stimulate members' innovative thinking through intellectual stimulation, thereby improving the team's overall performance [4]. As shown in Figure 2:



Fig. 2. Transformational leadership factors

3.2 The Impact of Transactional Leadership on Team Dynamics

The core of transactional leadership is built on a transactional relationship between achieving specific goals and corresponding rewards and punishments. Leaders clearly define goals, clarify roles and expectations, and motivate team members by rewarding behaviors that achieve those goals. This leadership style may improve work efficiency and output in the short term, but its impact on team dynamics may be limited. Transactional leadership is not sufficient to enhance mutual trust and cooperation among members, nor is it conducive to long-term learning and innovation of the team. Overemphasizing clear rewards and punishments may lead team members to focus only on short-term goals and overlook the value of teamwork and mutual growth.

3.3 The Impact of Other Leadership Styles on Team Dynamics

In addition to transformational and transactional leadership, other leadership styles significantly impact team dynamics. For example, generous leaders focus on establishing and maintaining good interpersonal relationships, which positively impact team cohesion and individual satisfaction of members. Authoritative leaders provide clear guidance to the team through centralized decision-making and rapid execution, enhancing the team's ability to respond quickly in situations requiring quick action. Democratic leaders encourage team members to participate in decisionmaking, enhance their sense of responsibility, and help improve team performance. Still, they may require more time to reach a consensus in the decision-making process. The laissez-faire leadership style relies on team self-management, and the team under this style needs to have a high degree of self-discipline and maturity. Overall, different leadership styles have varying impacts and effects on teams based on specific organizational environments and team characteristics and should be flexibly mastered and applied in practical applications.

4 Effect of Team Dynamics on Team Performance

4.1 Team Collaboration and Team Performance

Teamwork refers to the degree to which team members collaborate toward common goals and tasks. Good team collaboration can significantly improve team

performance, as it promotes effective integration and utilization of resources, strengthens the sense of responsibility and belonging among members, and reduces the occurrence of work duplication or aggressive behavior. Collaborative work can also reduce conflicts caused by misunderstandings inconsistencies between individual and team goals, improving decision quality and execution efficiency. In high-level team collaboration, members trust each other, share information, and build effective interactions, further stimulating collective creativity and problemsolving abilities and laying a solid foundation for high performance [5].

4.2 Team Communication and Team Performance

Team communication refers to the frequency and quality of information, ideas, and emotional exchange among team members, directly impacting team performance. Effective communication can ensure that team members have a common understanding of goals, strategies, and roles, enhance transparency in decision-making, and improve the speed at which the team adapts to external changes. Smooth communication helps quickly convey key information but also helps resolve misunderstandings and conflicts within the team, maintain team stability, and maintain efficient operations. Open and candid communication can also encourage members to propose new ideas and provide feedback, crucial for enhancing team learning and innovation capabilities [6].

4.3 The Impact of Other Team Dynamics Factors on Team Performance

In addition to team collaboration and communication, various other team dynamics factors affect team performance. The team conflict management approach determines how the team responds to internal disagreements and behavioral deviations. Appropriate conflicts stimulate new thinking and solutions, while excessive conflicts weaken team cohesion and work motivation. The diversity of team members not only brings a wide range of perspectives and skills but also requires leaders and the team to effectively manage the potential friction of diversity. In addition, team structure and incentive mechanisms can also affect the team's work style and motivation. A good incentive system can clarify goals, motivate members to work hard and improve overall performance. In summary, the interaction of numerous elements in team dynamics collectively shapes the final performance of a team. As shown in Table 1:

Table 1. Other team dynamics factors

Team dynamics factors	Impact description	Evaluation
		score
Team conflict management	Appropriate conflicts stimulate new thinking; Excessive conflict weakens cohesion	7/10
Team member diversity	Bringing a wide range of perspectives and skills;	8/10

		Friction needs to be managed effectively	
Team structure		Affect the way of working and process efficiency	9/10
Incentive mechanism		Clear goals motivate members to work hard	7/10
Team	performance	The overall performance under the interaction of various factors	8.25/10
comprehensive score			

5 Interaction Between Leadership Style and Team Dynamics

5.1 The Shaping Effect of Leadership Style on Team Dynamics

Teamwork is not only the result of the joint efforts of all members but also a dynamic interactive process that reflects the cohesion and collaborative spirit within the team. High-level team collaboration typically means members have a common cognitive foundation and can effectively understand and resonate with each other's needs and contributions. Team members complement each other in collaboration, expanding strengths and addressing weaknesses, which enhances the overall ability of the team to face complex challenges.

The optimization of team collaboration is often attributed clear role assignments, communication channels, and a respectful atmosphere toward each other. Team leaders play a crucial role in this, requiring effective leadership to establish and maintain these factors, ensuring that unnecessary obstacles do not disrupt collaboration. Leaders need to identify and mobilize the abilities of each member, motivate the team to go beyond personal interests and prioritize team goals. Emotional connection and trust within a team are also crucial for efficient collaboration. These factors can create a supportive work environment where members are willing to share key information and knowledge and actively provide mutual assistance. A team in this environment can achieve a learning curve faster, adapt to new changes, and maintain stability and resilience in uncertainty and pressure [7].

A team with high-level collaboration often excels in performance, and its results are not only the completion of simple work tasks but also reflected in stimulating team potential, improving innovation level, and promoting sustained growth. The work efficiency of this team far exceeds the sum of individual work, and it is precisely because of the power of collaboration that the team can become a true whole.

5.2 The Feedback Effect of Team Dynamics on Leadership Style

Team communication is key in ensuring operational efficiency and creativity within a team. It affects the collaborative relationships among team members and profoundly impacts the team's problem-solving and decision-making processes. When team members can speak freely and share information and feedback promptly, the team can quickly respond to changes in internal or external environments and maintain competitiveness.

Good communication can establish a common understanding of tasks and ensure all members work in the same direction. It helps team members understand goals and responsibilities, reducing overlap and resource waste during task execution. When each member is clear about their job responsibilities and the needs of others, the team's workflow becomes smoother and reduces obstacles that hinder efficiency.

Communication plays an indispensable role in conflict management. Effective communication allows teams to identify the root cause of conflicts and solve problems when they arise rather than allowing conflicts to accumulate. Proper handling of conflicts helps maintain team harmony and unity, promoting team performance improvement. More importantly, the openness of team communication channels promotes an atmosphere of creative thinking and knowledge sharing. The members' willingness to share their insights and ideas increases the possibility of team innovation. In an environment that encourages communication and feedback, members often become more actively involved in team activities, enhancing overall collaboration and creativity.

Effective communication is the core of team success, as it can promote better performance in task execution, problem-solving, and innovation processes. Leaders are responsible for establishing and maintaining a positive and healthy communication environment, maximizing the team's potential [8].

5.3 The Cooperation between Leadership Style and Team Dynamics

An effective leadership style and positive team dynamics complement and enhance each other, and combining the two can enable the team to achieve higher performance levels. On the one hand, leaders set an example for team members through their style and behavior, guide team development, and stimulate members' enthusiasm and creativity. For example, when leaders adopt a transformational leadership style, they value and advocate innovative thinking, encouraging team members to accept challenges and try new things, leading to a positive exploratory trend in team dynamics.

On the other hand, positive dynamic factors such as collaborative spirit, open communication, and effective decision-making mechanisms within the team can enhance the leadership effectiveness of leaders. In a dynamic and collaborative environment, leaders' ideas and strategies are easier to understand and execute, and the influence of leadership can be effectively transmitted and expanded within the team. Team achievements and member feedback provide important information to leaders, helping them adjust and optimize their leadership strategies, forming a virtuous cycle.

When leadership style and team dynamics are effectively coordinated, the team can quickly achieve short-term goals and maintain long-term stable development and innovation. For leaders, understanding and applying team dynamics and adjusting their leadership style to meet the needs and challenges of the team is the key to improving team performance. Leaders need to have keen insight, understand the team's current situation and development trends, and effectively communicate and mobilize to significantly enhance the overall functionality and results of the team.

6 Conclusion

This study explores the relationship between leadership style and team dynamics and how this relationship affects team performance. Through theoretical analysis and empirical research, we have drawn several important conclusions. Firstly, leadership style plays a decisive role in shaping all aspects of team dynamics, as a leader's behavior and management style directly affect the team's communication efficiency, collaboration patterns, conflict resolution, and innovation capabilities. Secondly, team dynamics significantly impact leadership style, as an efficient team can encourage leaders to adapt and optimize their leadership skills to cope with different situations and needs.

We have found that effective collaboration among team members is a key factor in achieving goals and improving performance, and good team communication is an important prerequisite for ensuring smooth team collaboration. Meanwhile, leadership styles that allow and inspire innovation and change, especially transformational leadership, can inspire higher-level dynamic mechanisms and outcomes within the team. On the other hand, improving team performance proves the necessity of collaborative work between leadership style and team dynamics. Leaders must choose and adjust the most appropriate leadership style based on team characteristics, task characteristics, and organizational environment.

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