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Building innovative teams:Leadership strategies across the various stages of team development

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Abstract   Globalization, advances in technology, and shifting consumer preferences affect almost everyone. Because of pressures from the external environment, organizations face rapid and constant change. The nature of work has become complicated; it is difficult for individuals to achieve much on their own. Consequently, organizations rely heavily on expert, innovative work teams. These highly evolved teams do not develop overnight; rather, they evolve and develop in stages, and the team's leadership must change over time. In this article, I present the building blocks of team innovation, outline the internal processes that lie at the core of innovative performance, and provide critical leadership strategies for each stage of team development. I conclude with implications for developing leaders with the capabilities to nurture and build innovative teams.

1. Innovative teams: Achieving excellence in a constantly changing world

"In accomplishing the exploration of Pluto, the New Horizons team set records and achieved many firsts. But, more importantly, we think, they demonstrated to the world some of what are the best qualities of humankind: inquisitiveness, drive, persistence, and the ability to work in teams to achieve something larger than life."

— Stern & Grinspoon (2018, p. 271)

On July 20, 1969, the astronauts from Apollo 11 landed on the moon. On January 28, 1986, the Challenger space shuttle exploded, killing all seven crew members. On July 14, 2015, the spacecraft New Horizons completed the first mission to Pluto. For more than 50 years, NASA

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space missions provided stunning examples of team success along with sobering, and sometimes tragic, stories of team failure. Along the way, they have also provided insights into the dynamics of team function; these insights prove to be invaluable as organizations react to a constantly changing environment.

Today's business landscape is turbulent. Required response times have shortened, as companies must adapt quickly to external pressures like globalization, advancements in technology, political turmoil, and changing consumer preferences. In addition to environmental uncertainty, the nature of work is now more complex. It has become almost impossible for an individual to complete a complicated task alone. In response, companies have flattened organizational structures, pushed decision-making down to the lowest levels, and relied heavily on teams. Teamwork has become so essential that teams have become the building blocks of organizations (Kozlowski & Bell, 2013). Indeed, work teams are ubiquitous, existing everywhere from the C-suite, with top management teams, down to the production floor with project and product development teams. Regardless of their type and location, today's work teams must be able to generate new ideas, solve new problems, tackle challenging tasks, and adjust to quickly changing circumstances. In short, today's teams must be adaptive and innovative (Edmondson, 2012; Kozlowski, Watola, Jensen, Kim, & Botero, 2009).

Because teamwork has become so vital to organizational success, there has been an extensive amount of research on team leadership, team formation, and team processing. In any type of team, the leader must plan, organize, and monitor team progress (Burke, DiazGranados, & Salas, 2011). Over time, most teams go through distinct stages of development marked by transition points (e.g., forming, storming, norming, performing; Gersick, 1988; Tuckman, 1965). Team action plays out in episodic and repetitive cycles. A team will approach a problem or a challenge, think about possible solutions, and then execute a chosen strategy. Afterward, the team reflects on their success or failure and begins the process again (Marks, Mathieu, & Zaccaro, 2001).

Recent research has focused on innovative teams. The needs of these teams are extremely complex (Mumford, Robledo, & Hester, 2011). In particular, innovative teams require a supportive organizational environment, psychological safety, diversity, communication, and continuous learning (Edmondson, 2012; Mumford et al., 2011). However, the research on team innovation is relatively

new, and little information exists about leadership functions and responsibilities across the various stages of innovative team development (Burke, Georganta, & Hernandez, 2017; Kozlowski et al., 2009; Mumford et al., 2011). As a result, team leaders have scarce guidance as they try to navigate changing dynamics over time and facilitate team transitions from one stage to another (i.e., taking a newly formed group of people and shaping them into a highly functioning, innovative unit).

This article addresses that knowledge gap. I present the building blocks of team innovation and outline the internal processes that lie at the core of innovative performance. Then, I look at the various stages of innovative team development and provide suggested leadership strategies for each of these stages. To conclude, I discuss implications for training team leaders.

2. The building blocks of team innovation

Innovative teams develop or introduce something new and useful to the organization. While some teams are primarily assembled for innovation purposes (e.g., new product teams, R&D teams), innovation occurs in many contexts and in many different types of teams (van Knippenberg, 2017). Regardless of their primary purpose, innovative teams are involved in the creative process: generating ideas, exploring, and experimenting. As such, innovation requires learning, and learning requires information. Teams obtain new information via new team members. As new members join the team, they add their knowledge to the team's informational resources, which can enhance the innovative capacity of the team. Innovative capacity increases when newcomers are diverse, offer unique perspectives, and feel comfortable sharing their knowledge.

The team also acquires new knowledge through individual learning. Learning is achieved in several ways. Team members seek personal and professional development via various external social networks as well as professional conferences and training sessions. These sources of information can be shared and leveraged to the team's advantage.

However, acquiring information is not enough. Teams must use that information effectively in order to achieve innovative outcomes (van Knippenberg, 2017). As individuals within a team learn new things, they share with one another. One idea leads to the next. Ultimately, these thoughts emerge into something that belongs to the collective as a whole. It is through this process that

teams can achieve what is commonly referred to as synergy.

Consequently, knowledge sharing and integration lie at the heart of innovative team interaction and performance. However, it is disheartening how often people fail to share what they know. It is perhaps even more disheartening when people do share knowledge, and their teammates disregard or dismiss the information (De Dreu, Nijstad, & van Knippenberg, 2008; Mesmer-Magnus & DeChurch, 2009). To function optimally, innovative teams must possess the motivation to learn and acquire a deep, thorough understanding of the problem at hand as well as the motivation to cooperate, share, and agree upon a collaborative solution (De Dreu et al., 2008). These motivations can be cultivated and encouraged by the team leader. Leadership behaviors are instrumental in the development of creative, cohesive, and fully functional teams. One of the team leader's foundational responsibilities is to establish a team climate that is conducive to innovation (Edmondson, 2012; Mumford et al., 2011; van Knippenberg, 2017).

Defined as the "team members' shared perception of the atmosphere created by practices, procedures, and rewards within the team" (van Knippenberg, 2017, p. 220), the team climate is an unspoken yet powerful force that provides implicit guidance on how team members think, feel, and act. Four factors contribute to an innovative team climate: (1) a shared objective and vision; (2) the safety to speak up and voice an opinion; (3) a common and shared commitment to task excellence; and (4) organizational support for innovation (Anderson & West, 1998; Edmondson, 2012). Setting a tone for respect and mutual trust is essential as innovation hinges on new ideas and experimentation. Innovation can be messy. By definition, this trial and error process results in a level of inefficiency. Indeed, on the road to success, innovative teams often meet with failure and disappointment (Edmondson, 2012). For the team leader, this creates a dilemma. Although the team must have an innate sense of safety and must not fear the consequences of failure, they must also ultimately produce results.

An effective, innovative team climate involves a delicate blend of curious creativity with productive discipline (Edmondson, 2012). Key to creating this tricky balance is the team leader's passion and enthusiasm for the project. A classic example is the development of the iPhone. While providing an elegant and novel product, Steve Jobs also insisted on high standards of quality (Isaacson, 2012). Creating something brand new, yet perfect, is tantamount to impossible. However, by infusing the project with his own energies and work ethic, Jobs was able to model the behaviors needed to develop an innovative product and, by doing so, inspire others on the team. As shown in Figure 1, the building blocks of team innovation are bound together by a challenging yet psychologically safe team climate that can be encouraged by an effective team leader (Edmondson, 2012).

3. Inside team innovation: The task engagement and learning cycle

To the casual observer, teamwork is reasonably straightforward: the team has a task, they engage in various activities to achieve that task, and those task-related activities end with a final outcome (e.g., a product or a decision). However, in reality, teamwork—especially innovative teamwork—is not clear-cut. Instead, it can be complicated, and progress is rarely achieved through clean and linear processes. For example, the team considers the task at hand and agrees on an approach. After the team has engaged in an action, they evaluate the outcome. If the outcome is not completely satisfactory, the cycle is repeated. Each cycle, the team reconsiders the strategy, calibrates their actions, and reevaluates the results. So, as the team engages in trial and error, teamwork can be thought of in terms of a repetitive task engagement cycle (Marks et al., 2001). Because learning occurs as the team works through a cycle, the processes within the task engagement cycle are steps in a learning process (Edmondson, 2012).

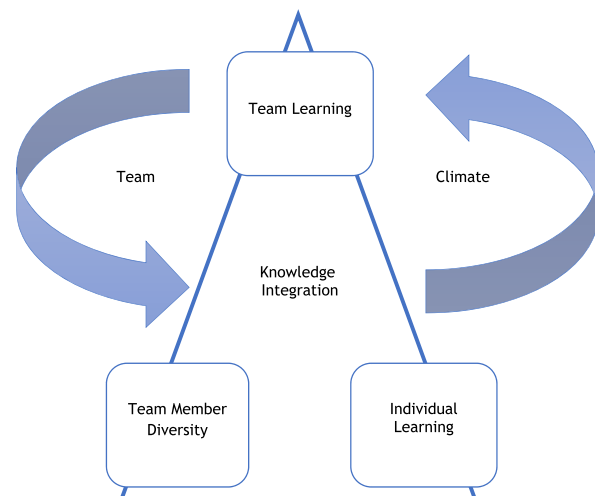**Figure 1.   Building blocks of team innovation**

Table 1.   Steps in the task engagement and learning cycle*

Task engagement and learning cycle	Description	Common mistakes	Effective strategies
1. Problem diagnosis and/or opportunity detection	Identify issues with the current situation that expose weaknesses or present problems. Also, look for opportunities to increase market share or improve customer satisfaction. Throughout the repetitive iterations of this cycle, continue to identify incremental improvements.	Holding focus groups and asking the customers what they want. Customers may not always have the information or creative ability to envision what "could be." Being satisfied with "good enough."	The genius of Steve Jobs and Apple was to envision what consumers wanted before they realized what they wanted (Isaacson, 2012). The culture of Apple during the development of the iPhone was one of experimentation but also one of high-performance expectations & perfection (Isaacson, 2012).
2. Transition: Preparing for action	Compose the team. Decide how to approach the problem, and identify multiple potential avenues for action. Provide resources and set challenging, yet doable goals. Design tasks so that they enhance team member interactions and social development.	Focusing on team member diversity but not building on existing relationships. Fix: Ensure that some of the new team's members already know one another. For example, Nokia moves entire small teams intact. This helps transfer skills into new areas (Gratton & Erickson, 2007).	Define roles but allow individuals latitude in how to perform the actual task. This will encourage the sense of autonomy necessary for innovative functioning (Mumford et al., 2011).
3. Learning through action	Approach the task as a learning opportunity. Foster the following attitudes, behaviors, & cognitions: ● Commitment to teamwork ● Trust & psychological safety ● Communication & coordination ● Shared understanding of team member roles	After the team becomes established, high cohesion may lead to groupthink, where members are reluctant to disagree. Fix: Foster a climate of psychological safety and tolerance for dissent (Edmondson, 2012).	Set team boundaries. In the case of the 2010 Chilean mine rescue, team leaders spanned organizational and national boundaries to bring in a diverse group of experts. At the same time, they protected the team from well-intentioned but potentially distracting would-be helpers (Rashid, Edmondson, & Leonard, 2013).
4. Reflection & Repetition	Cultivate a no-blame, learning-from-failure environment and culture: ● Look at outcomes & processes ● Diagnose deficiencies and weaknesses	Team members are afraid to report problems and engage in the escalation of commitment. Fix: Learn from failure (Edmondson, 2012).	Make systematic use of information & reward early detection of problems (Edmondson, 2012).

* Repetitions of the cycle are used to leverage team development.

In addition to promoting task learning, the task engagement cycle can also be used as a tool for overall team development. When a team is initially formed, the members are new and unsure of each other. Over time, as they work together and engage in team processes, they learn about the task and also about each other. Acquaintances form, relationships solidify, and the social climate of the team begins to gel. In each stage and as the team refines task-specific knowledge and abilities,

they also refine their sense of identification, commitment, and security within the boundaries of the team (Edmondson, 2012; Kozlowski et al., 2009). Indeed, it is by working through multiple iterations of the task cycle that the team reflects, learns, improves, and develops the capabilities needed to achieve and sustain synergistic innovation. This cycle can also shape a newly formed group of people into a cohesive and innovative team. As shown in Table 1, there are four phases within the task engagement and learning cycle: problem diagnosis, transitionary planning, action, and reflection (Kozlowski et al., 2009).

3.1. Problem diagnosis and/or opportunity detection

The team's mission should be tightly coupled to the company's strategy. As such, the team's objective should be to identify opportunities or defend against potential threats. Because of shifting consumer preferences, a company might assemble a new product team such as the one that developed the iPhone. Other teams might form specifically to address a problem. A classic example of innovative teamwork—and one that crossed organizational boundaries—is the team that rescued the Chilean miners in 2010; a diverse group of experts came together and, against all odds, were able to save 33 miners trapped in the Atacama Desert (Rashid, Edmondson, & Leonard, 2013). Although some teams are designed with innovation as their primary focus, all teams should be mindful of opportunities to engage in innovation and continuous improvement (van Knippenberg, 2017). Small and incremental improvements can, over time, significantly contribute to the organization's success. Consequently, all teams should be focused on learning as they reiterate the steps in the task engagement cycle (Edmondson, 2012; Kozlowski et al., 2009).

3.2. Transition: Preparing for action

In this phase, the team must decide how to approach the task at hand. In the initial stage of team development, one of the most important leadership functions is to assemble a proper team (Burke et al., 2017). While it is important to find people with levels of expertise and the capacity for creative thought, it is equally important that these people can work well with others (Burke et al., 2017; Edmondson, 2012; Mumford et al., 2011). When it comes to innovative team performance, research findings point consistently to the importance of a positive team social structure.

Introducing an individual who has trouble getting along with other people can have a disastrous effect on the overall team climate and working environment (Mumford et al., 2011). Another important leadership function during this phase is developing an overall plan of attack (i.e., developing an action strategy; Edmondson, 2012). In the early stages of team development, this responsibility falls on the team leader. In later stages, the whole team can take an active part in developing the action strategy (Kozlowski et al., 2009). Regardless of who has developed the strategy, it is the leader's responsibility to ensure that the team has enough resources to function (Kozlowski et al., 2009).

One key leadership role is the ability to evaluate proposed strategies and ideas (Mumford et al., 2011). At this phase of the task engagement cycle, members float multiple ideas around. The leader must be able to evaluate all of these ideas effectively, consider the feasibility of each, and foresee any potential future ramifications. It is through proper evaluation, planning, and forecasting that innovative team leaders can guide the team into the most productive avenues of advancement (Mumford et al., 2011).

3.3. Learning through action

During the actual completion of the team's task, the team leader must maintain a dual focus: monitoring individual team member performance and monitoring team member interactions (Marks et al., 2001). Performance and team interactions are bolstered by individual attitudes, behaviors, and cognitions. The team leader should shape individual commitment to the team's mission as well as to other team members. Confidence should be bolstered. Trust and respect should be cultivated and expected as a norm. The leader should encourage team members to seek help or ask questions, help each other, and anticipate each other's needs. Each team member should clearly understand their role on the team as well as the role of other team members. If a team member has certain expertise, the rest of the team should feel comfortable going to that person for help or information (Kozlowski et al., 2009). Performance monitoring is particularly important when the team is operating in a stressful environment or working with a new technology. Since innovative work usually occurs in complex, dynamic, and stressful environments, it is not unusual for plans to go awry. In these situations, the leader and the rest of the team must be prepared to adjust goals, revisit strategies, reinforce team coordination,

Table 2.   Leadership roles and strategies across the stages of innovative team development

Leader's role		Mentor	Instructor	Coach	Facilitator
Stage of team development		*Forming*	*Storming*	*Norming*	*Performing*
Repetitive Task Engagement & Learning Cycle	*1. Problem diagnosis or opportunity detection*	Identify the problem or potential opportunity	Stress learning & continual improvement	Stress learning & continual improvement	Stress learning & continual improvement
	2. Transition: Preparing for action	Compose the team Establish expectations & goals Structure roles Determine the initial action strategy	Evaluate strengths & weaknesses of ideas Plan and organize to enable the realization of ideas Help the team with sensemaking Establish expectations of excellence	Evaluate strengths & weaknesses of ideas Establish expectations of excellence Set challenging goals Question assumptions Plan and organize to enable the realization of ideas	Facilitate evaluation of strengths & weaknesses of ideas Team self-management and the development of shared leadership is occurring Strategies are formulated by the team Plan and organize to enable the realization of ideas
	3. Learning through action	Manage team boundaries Provide resources Be supportive of the social climate	Monitor progress Be aware of potential tensions between members Encourage the beginnings of collective cognitions Be supportive of the social climate	Monitor progress Encourage continued exploration and experimentation Encourage the continued development of collective cognitions Be supportive of the social climate	Continue to manage team boundaries Monitor team output and interactions Promote the team's accomplishments to upper management. Scan the external environment. Continue to be supportive of the social climate
	4. Reflection & Repetition	Establish a norm of rapid cycle learning (Edmondson, 2012)	Provide individual feedback & coaching	Provide team-level feedback	Monitor team-level reflection & provide feedback as needed
Leader's foundational responsibilities for an innovative team climate		• Convey a compelling vision • Foster an environment of creativity & accountability	• Promote psychological safety • Encourage cooperation and prosocial motivations	• Develop mutual trust • Encourage the development of collective cognitions	

and provide individuals with necessary task assistance. This involves not only direct intervention by the team leader but also developing and encouraging backup behaviors. For example, when a team member is overloaded or overwhelmed, a teammate should be willing and able to assist with a task (Salas, Sims, & Burke, 2005). Throughout the cycles of task engagement, the team leader should

continue to define roles, maintain the team's membership boundaries, set challenging goals, and encourage the development of psychological safety, mutual trust, and team cohesion (Burke et al., 2017; Kozlowski et al., 2009).

3.4. Reflection and repetition

Innovation implies change and continual improvement. In order to effectively improve performance, the team must engage in honest reflection and learning. This requires an objective critique of deficiencies and problems (Edmondson, 2012). In this way, with frank and constructive feedback, team members can see which skills and behaviors were effective and, more importantly, which need improvement (Bell & Kozlowski, 2009). During team reflection, the team leader should discuss performance, diagnose deficiencies, and provide individual-level developmental feedback to team members (Kozlowski et al., 2009). In the end, the focus should remain on learning and improving subsequent performance (Edmondson, 2012).

4. Leveraging the cycle: Leadership strategies and roles for each stage of team development

The quality of team performance and the nature of team interactions vary depending on how long the members have been together and how well the team has been functioning as a unit. This concept, articulated by Tuckman (1965), is known as the various stages in group development. Groups typically go through a forming, storming, norming, and performing stage, and these stages are punctuated by distinct transition points (Gersick, 1988; Tuckman, 1965). Consequently, the team's needs will change in accordance with their developmental stage, and the team leader's role and influence should shift accordingly (Burke et al., 2017; Druskat & Wheeler, 2003; Kozlowski et al., 2009).

In their leadership theory for adaptive teams, Kozlowski et al. (2009) argued that leadership responsibilities fluctuate with the stages of team development. At the heart of this theory, the team leader leverages the task engagement cycle to develop and shapes team capabilities. Essentially, the leader uses each episode of the task engagement cycle as a learning and development opportunity. Before the team engages in a task, the leader assesses the team's capabilities. During the action phase, the leader monitors individual performance and team interactions. Afterward,

during the reflection phase, the leader and team review what happened. Together, they use problems or deficiencies as learning opportunities and input for the next episode of the task engagement cycle. In this way, through iteration and repetition, the task engagement cycle becomes a vehicle for team learning, growth, and development. As the team progresses, the team leader's role shifts from mentor to instructor, then coach, and finally to that of team facilitator (Kozlowski et al., 2009). See Table 2 for a depiction of this process.

4.1. The leader as a mentor: Forming a new team

In the earliest stages of team formation, everything is new, and people are unsure about the team and their role in it. At this point, the leader's role is that of a mentor, and the focus is on team composition, establishing expectations, and defining the mission, strategy, and goals (Burke et al., 2017; Kozlowski et al., 2009). During the preparation phase, the team leader should select members based not only on their technical abilities but also on their ability to collaborate with other team members. The overall environment should be open with communal spaces and conducive to collaboration (Gratton & Erickson, 2007). In terms of team composition, combining people with different skill sets, backgrounds, and perspectives will enhance the team's ability to generate unique ideas and engage in innovative problem-solving behaviors. However, when diverse people are put together, it may become difficult to develop the social bonds that are so critical to team cohesion. To avoid a huge introductory learning curve, the leader may want to take advantage of existing relationships within the company. For example, when Nokia staffs their new teams, they make sure a certain percentage of people already know each other. This helps not only with establishing social norms and expectations but also with knowledge transfer within the company (Gratton & Erickson, 2007).

During the action phase, the leader should make sure that the team members begin to identify with the team and should stress bonding and social interactions. In addition, the leader should manage team boundaries, meaning that everyone should begin to understand their role and the role of others. To ensure that individuals can perform their duties, the team leader should make necessary resources available (Burke et al., 2017). At this point, because everyone is new to their jobs and their roles, the leader must closely monitor individual performance. If a team member has

difficulty with a task, the leader should be prepared to directly intervene and provide needed assistance (Kozlowski et al., 2009).

During the reflection phase, the team leader should provide individual members with feedback and help them with understanding and sense-making (Burke et al., 2017). During feedback sessions, the leader should stress the learning nature of the reflective exercise, fostering psychological safety and a climate of mutual respect (Edmondson, 2012). The team leader must promote a positive social atmosphere, as this is critical for team creativity and innovative work (Mumford et al., 2011).

4.2. The leader as an instructor: Encouraging collaboration

As people gain an understanding of the overall team mission and structure, they focus on mastering their individual duties and perfecting their roles within the team. During this stage, the team leader serves as an instructor and should encourage team members to ask questions and to feel comfortable seeking help when they face difficulties (Kozlowski et al., 2009). It is also at this point that the team is most vulnerable to conflict, or what is commonly known as "storming" (Burke et al., 2017; Tuckman, 1965).

In the preparation phase, the overall goal is to foster a problem-solving culture in which team members strive to improve performance, make fewer errors, and become more familiar with the responsibilities of others on the team (Kozlowski et al., 2009). The team leader should help members understand what is happening (i.e., help with their sensemaking; Burke et al., 2017). To encourage an inclusive and innovative atmosphere, the team leader should stress that all ideas are welcome and that it is safe to voice opinions (Edmondson, 2012). It is also the team leader's function to evaluate the various ideas, identify the most promising ones, plan for their execution, and consider potential future fallout or ramifications (Mumford et al., 2011).

In the action phase, the leader should establish goals that are challenging and thereby push team members to improve task proficiencies (Morgeson, DeRue, & Karam, 2010). The team leader should continue to stress that help-seeking behaviors are always acceptable and encouraged. This improves individual task mastery and conveys a climate of psychological safety and knowledge sharing (Edmondson, 2012). In addition to direct assistance, the leader should actively encourage the team to engage in helping behaviors, which should

promote overall team cohesion and coordination (Kozlowski et al., 2009). Social development is crucial at this point, as people realize their responsibilities to the team and become committed to team success. It is also a time when emotions might become strained as people disagree about leadership, structure, and power (Burke et al., 2017). Because innovation depends on maintaining a positive peer environment, it is imperative that the team leader actively promotes a supportive social environment (Edmondson, 2012; Mumford et al., 2011).

In the reflection phase, the goal is to bolster confidence and self-efficacy. At this point, team members should be able to identify the areas in which they need to improve (i.e., engage in self-regulation). Team conflicts should be resolved and an emphasis should be placed on cultivating and maintaining a positive social environment (Mumford et al., 2011). Assistance and training should be offered to individuals so they can continue to improve their skills (Kozlowski et al., 2009).

4.3. The leader as a coach: Working with a cohesive team

After the team members have become comfortable with their individual roles and tasks, their attention should shift to perfecting teamwork (Burke et al., 2017; Kozlowski et al., 2009). During this stage, the team is becoming a cohesive unit. The team leader's role becomes one of a coach and expert assistant. At this point, team members should begin to relax as conflicts and tensions from the earlier stages have been resolved (Burke et al., 2017). Now, the social climate should be characterized by mutual trust, a willingness to share information, and a willingness to cooperate and reach collective agreements (Edmondson, 2012; Kozlowski et al., 2009).

In the preparation phase, rigorous goals should stretch individual task mastery yet also include team coordination improvement. By implementing challenging goals, the leader continues to encourage the learning necessary to support innovation while also stressing the teamwork necessary to make innovation work (Edmondson, 2012; Mumford et al., 2011). In the action phase, backup behaviors become automatic and expected. The team now has a collective sense of confidence and identity. As such, the focus is on solidarity (Kozlowski et al., 2009). The team members have developed a shared mental model through a common understanding of when and how team members should interact (Mathieu, Goodwin,

Heffner, Salas, & Cannon-Bowers, 2000). Trans-active memory systems are developed as team members are aware of and capitalize on each other's expertise (Lewis & Herndon, 2011). Communication is accurate and efficient.

Problems may arise at this stage because of such high team cohesion. Members are now working so well together that the team may fear change and membership disruption, or they may be unreceptive to new ideas (Burke et al., 2017). To combat this, the team leader should continue to emphasize safety and openness in social interactions (Edmondson, 2012). The team leader should also stimulate intellectual growth by asking challenging questions, requesting creative solutions, and encouraging alternative viewpoints and interpretations (De Dreu et al., 2008; Mumford et al., 2011). At this stage, rather than provide feedback, the leader should facilitate collective reflections of group performance. Because team members can engage in individual regulatory behaviors and self-diagnose problems and deficiencies, the team leader's feedback should be at the team level. The feedback should be focused on team coordination, strategy selection, and goal revisions (Kozlowski et al., 2009).

4.4. The leader as a facilitator: Enabling and promoting the innovative team

At this stage, the team functions at a very high level. It can adjust to unexpected changes and engage in innovative behaviors. At this time, the leadership function becomes diffused, with various team members assuming responsibilities (i.e., shared leadership). Continuous learning and improvement are the norms, and team members have confidence in the team's ability to perform and solve problems. Mutual trust and respect are a hallmark of the atmosphere, as team members engage in collaboration and backup behaviors (Kozlowski et al., 2009). The formal team leader should transition to the role of a facilitator, focusing on obtaining external resources, promoting the team's progress to management, and developing long-term plans (Kozlowski et al., 2009). In other words, because the team can self-manage, the formal team leader can divert attention from inside monitoring to outside scanning. By switching from an internal to an external focus, the team is better positioned to detect and respond to change (Kozlowski et al., 2009).

In the preparation phase, the formal team leader encourages the team to build on the foundations of task expertise and team cohesion. The goals are to continue to self-manage and to engage in continuous learning and improvement (Kozlowski et al., 2009). Thus, the team should focus on hard work and be engaged in ongoing training and development opportunities (Burke et al., 2017). During the action phase, the team should be well equipped to accomplish routine tasks as well as successfully strategize and solve novel and unique problems. Because leadership is now shared, no single team member is overwhelmed by decision-making. Shared mental models and developed transactive memory systems allow the team to quickly grasp and cope with unexpected developments and take advantage of serendipitous opportunities (Kozlowski et al., 2009).

In the reflection phase, the team can engage in self-regulation and can determine action and corrective strategies. The team should provide situational updates, and the formal team leader should monitor team progress and provide developmental feedback. At this point, conflicts should be rare, but should one arise it should be resolved quickly to prevent damage to the team's morale and productivity levels (Burke et al., 2017).

4.5. Special considerations

Teams develop at different paces and in different ways. Some teams may fly through stages and hit transition points early, while other teams may become stuck at a particular point (Gersick, 1988; Tuckman, 1965). Team membership may fluctuate, and an infusion of new people might set the team back. Given the vagaries of contemporary organizational life, the formal team leader should always keep an eye on the team, monitoring progress and social interactions. Although the goal is autonomy, the leader should be prepared to intervene if the team encounters problems (Burke et al., 2017; Kozlowski et al., 2009).

Other conditions warrant special consideration as well. Certain teams may require additional attention. Virtual and multicultural teams may encounter difficulties establishing cohesion or developing trust. As such, the team leader should engage in special strategies to reinforce social interactions between team members. For example, the leader should ensure that collaborative technologies are available and working properly, and

sensitivity should be shown regarding scheduled meeting times. The leader should make sure that remote members are kept up to date about current happenings and should serve as a communication hub between members (Ford, Piccolo, & Ford, 2017). In multicultural teams, differing customs and communication protocols may present challenges. In terms of language, there may be difficulties with fluency levels or understanding accents. In these situations, the team leader should make sure that team members are aware of potential pitfalls and take extra care to enable acceptable accommodations and compromises (Brett, Behfar, & Kern, 2006).

4.6. Implications for team leader development

Taking a newly formed group of individuals and molding them into a tightly cohesive, highly functioning, and innovative team takes a team leader with experience, organizational skills, and a knack for developing talent. It also takes someone savvy enough to leverage the learning opportunities inherent in the team's task engagement cycle, sensitive enough to gauge developmental transition points, and secure enough to release control and let the team become a self-managing unit that is focused on continual improvement—all attributes that are essential for creativity and innovation (Burke et al., 2017; Kozlowski et al., 2009; Mumford et al., 2011). Companies should invest in long-term leadership training designed to develop these types of individuals (Kozlowski et al., 2009). Investing in the development of long-term leadership skills may be as important, or perhaps even more important, than attracting star talent into the organization. As the co-founder of Pixar, an animation film studio noted for its creativity, once stated: "If you give a good idea to a mediocre team, they'll screw it up. But if you give a mediocre idea to a great team, they'll make it work" (Catmull, 2008, p. 68). Key to this strategy is developing the leaders who can nurture teams and make innovation happen.

References

Anderson, N. R., & West, M. A. (1998). Measuring climate for work group innovation: Development and validation of the team climate inventory. *Journal of Organizational Behavior, 19*(3), 235–258.

Bell, B. S., & Kozlowski, S. W. J. (2009). Toward a theory of learner-centered training design: An integrative framework of active learning. In S. W. J. Kozlowski & E. Salas (Eds.), *Learning, training, and development in organizations* (pp. 263–300). New York, NY: Routledge.

Brett, J., Behfar, K., & Kern, M. C. (2006). Managing multicultural teams. *Harvard Business Review, 84*(11), 84–91.

Burke, C. S., DiazGranados, D., & Salas, E. (2011). Team leadership: A review and look ahead. In A. Bryman, D. Collinson, K. Grint, B. Jackson, & M. Uhl-Bien (Eds.), *The Sage handbook of leadership* (pp. 338–351). Thousand Oaks, CA: Sage Publications Ltd.

Burke, C. S., Georganta, E., & Hernandez, C. (2017). The importance of time in team leadership research. In E. Salas, W. B. Vessey, & L. B. Landon (Eds.), *Team dynamics over time* (Vol. 18, pp. 95–122). Bingley, UK: Emerald Publishing Limited.

Catmull, E. (2008). How Pixar fosters collective creativity. *Harvard Business Review, 86*(9), 64–72.

De Dreu, C. K. W., Nijstad, B. A., & van Knippenberg, D. (2008). Motivated information processing in group judgment and decision making. *Personality and Social Psychology Review, 12*(1), 22–49.

Druskat, V. U., & Wheeler, J. V. (2003). Managing from the boundary: The effective leadership of self-managing work teams. *Academy of Management Journal, 46*(4), 435–457.

Edmondson, A. (2012). *Teaming: How organizations learn, innovate, and compete in the knowledge economy.* San Francisco, CA: Jossey-Bass.

Ford, R. C., Piccolo, R. F., & Ford, L. R. (2017). Strategies for building effective virtual teams: Trust is key. *Business Horizons, 60*(1), 25–34.

Gersick, C. J. G. (1988). Time and transition in work teams: Toward a new model of group development. *Academy of Management Journal, 31*(1), 9–41.

Gratton, L., & Erickson, T. J. (2007). 8 ways to build collaborative teams. *Harvard Business Review, 85*(11), 100–109.

Isaacson, W. (2012). The real leadership lessons of Steve jobs. *Harvard Business Review, 90*(4), 92–102.

Kozlowski, S. W. J., & Bell, B. S. (2013). Work groups and teams in organizations: Review update. *Cornell University.* Available at https://digitalcommons.ilr.cornell.edu/articles/927/

Kozlowski, S. W. J., Watola, D. J., Jensen, J. M., Kim, B. H., & Botero, I. C. (2009). Developing adaptive teams: A theory of dynamic team leadership. In E. Salas, G. F. Goodwin, & C. S. Burke (Eds.), *Team effectiveness in complex organizations: Cross-disciplinary perspectives and approaches* (pp. 113–155). New York, NY: Routledge/Taylor & Francis Group.

Lewis, K., & Herndon, B. (2011). Transactive memory systems: Current issues and future research directions. *Organization Science, 22*(5), 1254–1265.

Marks, M. A., Mathieu, J. E., & Zaccaro, S. J. (2001). A temporally based framework and taxonomy of team processes. *Academy of Management Review, 26*(3), 356–376.

Mathieu, J. E., Goodwin, G. F., Heffner, T. S., Salas, E., & Cannon-Bowers, J. A. (2000). The influence of shared mental models on team process and performance. *Journal of Applied Psychology, 85*(2), 273–283.

Mesmer-Magnus, J. R., & DeChurch, L. A. (2009). Information sharing and team performance: A meta-analysis. *Journal of Applied Psychology, 94*(2), 535–546.

Morgeson, F. P., DeRue, D. S., & Karam, E. P. (2010). Leadership in teams: A functional approach to understanding leadership structures and processes. *Journal of Management, 36*(1), 5–39.

Mumford, M. D., Robledo, I. D., & Hester, K. S. (2011). Creativity, innovation, and leadership: Models and findings. In A. Bryman, D. Collinson, K. Grint, B. Jackson, & M. Uhl-Bien (Eds.), *The Sage handbook of leadership* (pp. 405–421). Thousand Oaks, CA: Sage.

Rashid, F., Edmondson, A. C., & Leonard, H. B. (2013). Leadership lessons from the Chilean mine rescue. *Harvard Business Review, 91*(7/8), 113—119.

Salas, E., Sims, D. E., & Burke, C. S. (2005). Is there a 'Big five' in teamwork? *Small Group Research, 36*(5), 555—599.

Stern, A., & Grinspoon, D. (2018). *Chasing new horizons: Inside the epic first mission to Pluto.* London, UK: Picador.

Tuckman, B. W. (1965). Developmental sequence in small groups. *Psychological Bulletin, 63*(6), 384—399.

van Knippenberg, D. L. (2017). Team innovation. *Annual Review of Organizational Psychology and Organizational Behavior, 4*(1), 211—233.