



Leadership & Performance

The technology dimension of leadership: How to lead virtual teams in the 21st century knowledge economy

CQ Dossier | Evidence-based Leadership

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Executive summary

Changes in technology and the workplace have resulted in an increase in virtual teams. This CQ Dossier describes how leaders can effectively manage virtual teams and need a fresh set of skills to facilitate team effectiveness. The dossier draws on research and theory on leadership style and virtual teams.

Introduction

Through advances in technology and changes in the global economy, many organizations are now [recruiting and hiring personnel](#) to work remotely (Schmidt, 2014). These changes have also resulted in a need for virtual leadership. Effective leadership is an integral part of business effectiveness, so it is important for organizations to consider how best to integrate virtual leadership into business strategy. Based on research into virtual leadership, this dossier suggests several ways in which organizations can implement an effective virtual leadership system.

There is a growing number of companies who are now employing virtual teams. A study by MCIWorldcom (2001) found that in large companies, 61% of employees are engaged in a virtual team. Virtual teams have now become a major part of how work is organized and implemented in the workplace (Schmidt, 2014).

Because of this increase in virtual teams, there has also arisen a need for virtual leadership. Virtual leaders are responsible for supervising and managing virtual teams and to help them to be as effective as possible. There has been research on the effectiveness of leadership within a virtual team setting (e.g., Bell & Kozlowski, 2002; Purvanova & Bono, 2009) and this has enabled a deeper understanding of how to lead virtual teams. However, it is fair to say that most research has focused on how virtual teams can enhance organizational effectiveness. However, the research has shown that effective leadership style differs in virtual teams versus face-to-face interactions (Schmidt, 2014). This dossier focuses on how leadership style needs to accommodate for the differences in virtual versus face-to-face environments.

Virtual Leadership

First, context matters in leadership and the virtual team environment is different because of the use of different media tools such as teleconferencing. This difference in communication media creates a need for leadership to account for this change in environment in order to facilitate communication and to effectively engage with team members (Lord & Dinh, 2014). The virtual team context influences the process of leadership.

Leaders who manage virtual teams also need to consider the ways in which their subordinates process information. The differences in media communication e.g., email, phone, etc. influence the way in which information is presented and leaders are not always able to process important non-verbal cues if they don't have access to teleconferencing media. These differences in information sources have an impact on how the team and the leader is perceived (Schmidt, 2014). One way to deal with this change in information processing is for leaders of virtual teams to provide relevant information to enable effective team performance (Hoch & Kozlowski, 2012). When problems are discovered, the leader must gather information to determine the nature of the problem and use this information to devise and implement effective solutions (Bell & Kozlowski, 2002).

Research also suggests that [communication](#) is very important in leadership within virtual teams. The communication between leader and team members appears to have a great impact on team effectiveness within a virtual environment. Moreover, the social connections between team members appear to matter more in a virtual team environment (Gajendran & Joshi, 2012). This is probably due to the reduction in nonverbal communication and a reliance on email communication. One way to address this issue is through scheduling virtual conference meetings utilizing technologies such as Zoom or Skype. This can increase social connections between members because face-to-face communication is the richest form of communication media. It is important that leaders keep abreast of changes in technologies and reflect on how these technologies change interactions within a team. For example, a participative leader might use a virtual chat room to gain consensus from team members when making decisions. It is also important for leaders to consider how the

workforce reacts to differences in technology. Future generations of employees have grown up with technology and respond to social media with comfort and ease, preferring them as a communication method (Bennet, Maton, & Kervin, 2008). It is important that virtual leaders account for generational differences in acceptance of new technologies. One way in which to gain acceptance of new technologies is to implement effective training and development sessions that allow for older employees to become accustomed to new technologies. Training and development can ease anxiety among employees who are uncomfortable with new technology.

Leadership Style and Virtual Teams

Leaders also need to consider the type of behaviors that will have maximal impact within a virtual team. [Leader-member exchange theory](#) shows that the effective leader has a quality relationship with each member of the team. In research on virtual teams, leader member exchange is related to the amount of resources that a leader allocates to the team rather than having a direct impact on team and individual performance (Goh & Wasko, 2012). It does appear that the relationship between the leader and the team member can be strengthened significantly by communication frequency (Gajendran & Joshi, 2012). Communication frequency becomes even more important when geographic location and time zones of team members is more varied (Gajendran & Joshi, 2012). Consequently, it is important for leaders of virtual teams to communicate frequently with the members in the team. There is no research on how frequently to conduct virtual meetings, but it is important to have a plan that is amenable for all team members.

Over the last twenty years, there has been considerable research showing the effectiveness of [transformational leadership](#) on individual, team, and organizational performance. However, the findings of the effects of transformational leadership in virtual teams has received inconsistent support (Schmidt, 2014). It seems that transformational leadership has less of an impact on team performance when the teams are virtual (Hoch & Kozlowski, 2012). However, there is also research suggesting that transformational leadership is more effective in a virtual environment than a face-to-face setting (Purvanova & Bono, 2009). It seems that communication frequency

helps explain these conflicting results (Schmidt, 2014). What seems to matter is the actual amount of transformational leadership behavior enacted by the leader as opposed to perceived transformational leadership (Schmidt, 2014).

Virtual leaders can also increase their level of [charisma](#) within groups through telling personal stories and encouraging team members to perform well. Personal stories can be used to better connect team members and to build a climate of trust and social connection (Saphiere, 1996). Establishing strong personal relationships is a way to make virtual teams more effective (Hart & McLeod, 2003).

Enabling effective teams through technology

Technology is still advancing and can be used to create strong virtual teams. Online social media and internet-based applications allow users to create and share a variety of content among fellow users (Kaplan & Haenlein, 2010). For example, the live video conferencing program Skype can connect employees who work at a distance and to increase the social connections of virtual team members. These technologies also make it easier for leaders to connect with virtual team members and to increase their presence within the teams.

In conclusion, the workplace is rapidly changing due to technological advances and differences in ways of working. Organizations are now employing virtual teams to produce quality work. It is important that leaders prepare for the workforce of the future to be successful through utilization of effective technologies.

Key take-aways

- Virtual teams have now become a major part of how work is organized and implemented in the workplace
- Virtual leaders are responsible for supervising and managing virtual teams and to help them to be as effective as possible
- Effective leadership style differs in virtual teams versus face-to-face interactions
- Communication between leader and team members appears to have a great impact on team effectiveness within a virtual environment

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