

# Leading Virtual Teams

**Dan Novak**

*IBM Healthcare and Life Sciences, USA*

**Mihai C. Bocarnea**

*Regent University, USA*

## INTRODUCTION

New forms of organizations, such as virtual teams who primarily conduct their work through electronic media, are becoming more common. With the proliferation of information and communication technology (ICT), most organizational teams are now *virtual* to some extent (Martins, Gilson, & Maynard, 2004). Virtuality is now a matter of degree (Kratzer, Leenders, & Van Engelen, 2006) as most teams in knowledge-intensive organizations are somewhere on a continuum between traditional teams with no electronic media and completely virtual teams engaging through electronic interaction.

Many organizations have assumed that there are minimal differences between traditional teams and virtual teams (Rosen, Furst, & Blackburn, 2006). However, many scholars now suggest the differences are substantial, requiring different approaches and skills to virtual teams (Balotsky & Christensen, 2004). Virtual teams are complex, spanning boundaries across groups, functions, organizations, time zones, and geographies (Adler, Black, & Loveland, 2003), and the organizational leadership issues are important (Vakola & Wilson, 2004).

This article reviews the virtual team literature to uncover differences between virtual teams and traditional teams from an organizational leadership perspective. The purpose of this article is to understand what differences exist, what is known about the differences, what still needs to be studied, and some practical implications for organizations and leaders. The literature is reviewed around four leadership aspects of virtual teams: trust, communication, interaction, and the organizational system. The organizational system includes the role of the leader, the organizational structure, culture, goal setting, and training specifically for virtual teams. Practical implications from the literature and recommendations for further research are included in the discussion.

## BACKGROUND

New, flexible forms of organizations, such as virtual teams, are becoming more common and their use is expected to grow. Virtual teams are teams that have a clear task and that require members to work independently to accomplish the task, but are geographically dispersed and communicate through technology rather than face-to-face (Gibson & Cohen, 2003). Their work is “conducted mostly virtually through electronic media” (Malhotra & Majchrzak, 2004, p. 76). Virtual teams are an emerging organizational form for the 21<sup>st</sup> century, which is relatively unstudied (Stevenson & McGrath, 2004).

Effective virtual teams require more than just technology, although technology gets most of the credit for the emergence of virtual teams. The literature reveals that the driving factors behind virtual teams are the globalization of the world economy, hypercompetition, worker demands, the increasing sophistication of technology, the move toward more knowledge work, and the potential for cost savings (Shockley-Zalabak, 2002). Figure 1 illustrates the overlap of these factors that are driving the formation and use of virtual teams.

Virtual teams are substantially different from traditional teams; yet, virtual work was always examined as just an extension of traditional work (Robey, Schwaig, & Jin, 2003). Distance, boundaries, and reliance on ICT add levels of complexity that ordinary teams just do not have (Adler, Black, & Loveland, 2003). Virtuality requires new ways of thinking about leadership, communications, and teamwork, yet, very little information from a leadership perspective is available in the literature (Stevenson & McGrath, 2004).

Research on virtual teams has revealed the importance of trust, communication, interaction, and the organizational system. The literature emphasized trust as the primary issue in the establishment of virtual teams,

Figure 1. Factors driving the formation and use of virtual teams

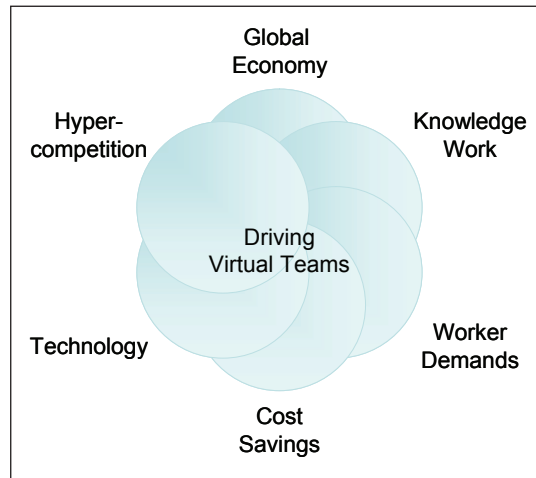
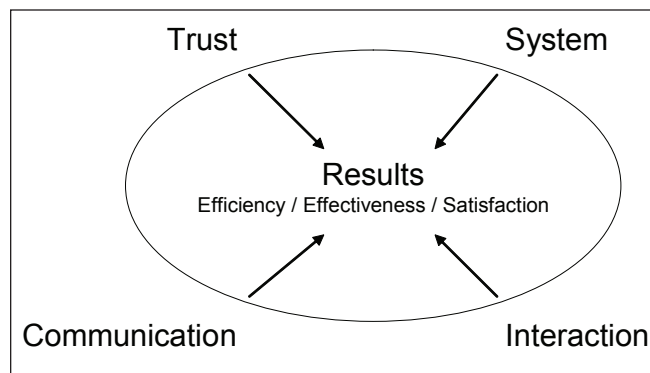


Figure 2. Virtual teams: The four dominant discussions found in the literature



with the issues of communication and interaction following closely behind. The literature agreed that trust, communication, and interaction must be approached differently for virtual teams (Balotsky & Christensen, 2004). The organizational system includes the role of the leader, organizational structure, culture, objectives, goal setting, rewards, and training.

Figure 2 illustrates a model of these aspects and emphasizes the interdependence between the aspects (Majchrzak, Malhotra, Stamps, & Lipnack, 2004). Following the model in Figure 2, this article will review the literature on virtual teams regarding trust, communication, interaction, and the organizational system.

## TRUST IS ESSENTIAL

Trust is the key issue for the development of effective virtual teams (Jarvenpaa, Shaw, & Staples, 2004). The antecedents of trust are not clear, however, as Ferrin (as cited in Bunker, Alban, & Lewicki, 2004) sampled 50 articles on trust and found 75 different variables that may predict interpersonal trust. Competence and performance were noted as important elements in establishing trust (Anderson & Shane, 2002), suggesting that trust is not the result of social bonds among virtual team members. Jarvenpaa et al. (2004) suggest that *swift trust* is based on the first few keystrokes, but it is

fragile and must be maintained by timely, predictable, and substantial responses over time.

Face-to-face interaction is an effective way to initiate trust, especially at launch and to celebrate significant milestones. Rutkowski, Vogel, van Genuchten, Bemelmans, and Favier (2002) posit that an initial face-to-face interaction makes the members feel more responsible to their contribution and to their competence, thus building their level of trust. In addition, virtual teams should build initial trust by establishing agreements and norms, aligning expectations, establishing shared vision and language, and creating accountability for trustworthy behavior (Abrams, Cross, Lesser, & Levin, 2003). Trust is related to communication and team interaction, and all three aspects are essential to building virtual teams (Majchrzak et al., 2004).

### COMMUNICATION AMONG VIRTUAL TEAMS

Communication problems are more likely in virtual teams, especially because time and distance boundaries can overdramatize the lack of timely communications (Stevenson & McGrath, 2004). Face-to-face teams normally have communication norms established and those norms may not transfer well to the virtual environment (Shockley-Zalabak, 2002). Norms create common understandings for communication and interaction, which then builds trust (Malhotra & Majchrzak, 2004; Zaccaro & Bader, 2003).

Majchrzak et al. (2004) posited that e-mail was a poor way to communicate, as was videoconferencing. Robey et al. (2003) posit that e-mail actually interrupts work, and Rutkowski et al. (2002) point out the lack of feedback available through e-mail. Majchrzak et al. (2004) emphasized newer groupware solutions as the key to effective communications, suggesting that groupware could document and report findings, followed by telephone conferences to resolve any differences.

Significant discussion surrounded the concept of synchronous vs. asynchronous communication methods, also known as “same time, different place” or “different time, different place” communication methods (Malhotra & Majchrzak, 2004, p. 77). Synchronous communication includes instant messaging, telephone conference, videoconference, and other application viewing and sharing technology, and is essential for high complexity tasks. Group support systems (GSS)

are also a form of synchronous communication that can improve communications, cohesion, collaboration, and team commitment (Huang, Wei, Watson, & Tan, 2003). Asynchronous communication consists of e-mails, threaded discussions, and databases of shared documents, and is acceptable for low complexity tasks (Bell & Kozlowski, 2002). In general, synchronous communications was found to improve the performance of virtual teams (Paul, Seetharaman, Samarah, & Mykityn, 2004); Rutkowski et al. (2002) even suggest that synchronous communications should be “enforced” on virtual teams. However, asynchronous communication allows virtual team members to communicate when they need to, and is effective for a simple exchange of information.

Electronic communications are often unevenly distributed, resulting in private communications that leave other team members uninformed or mistaken (Malhotra & Majchrzak, 2004). This disparity in communications also drives the momentum behind GSS and other coordinated communication systems (Huang et al., 2003). There are differences in communication between virtual teams and traditional teams, and frequent, coordinated communication is more important for virtual teams than for face-to-face teams (Zigurs, 2003). Leaders must address the social and human issues regarding communication, not just the technical issues. Effective communication can be encouraged through awareness, coaching, training, accountability, and accessibility (Cross & Parker, 2004).

### INTERACTION WITHIN VIRTUAL TEAMS

As observed in previous sections, team interaction ties closely to deep trust and effective communications (Majchrzak et al., 2004). Virtual teams tend to be more unstable than traditional teams, having a negative impact on team commitment and interaction. Virtual team leaders influence the rhythm and pace of the interaction (Yoo & Alavi, 2004); therefore, leaders have an opportunity to make a positive impact on virtual team interaction. Leaders must establish a climate that supports participation and interaction, with a subsequent impact on trust (Vakola & Wilson, 2004). A supportive climate starts with effective ICT practices but continues on to the goal setting, rewards, and other organizational issues (Huang et al., 2003).

Groups brought together virtually have not “formed” in any social sense, and thus they have limited cohesion and team commitment until they have an opportunity for face-to-face interaction (Zigurs, 2003). Virtual teams must learn to build interpersonal interaction in a virtual environment, and members of virtual teams have to adjust to the change in social mechanisms and the loss of nonverbal cues (Malhotra & Majchrzak, 2004). Without the proper levels of interaction, virtual team members can feel isolated, disconnected, and lacking a sense of place in the team and the organization (Balotsky & Christensen, 2004).

Avolio and Kahai (2003) suggest that virtual team members have more access to information and to each other, changing the way they interact and changing their relationship with leaders. ICT tools such as Instant Messaging (IM) can reduce the isolation among virtual team members and reduce the advantages of colocated teams (Malhotra & Majchrzak, 2004). As reviewed in this section, face-to-face interaction is preferable over virtual interaction; however, satisfying virtual interaction is possible (Potter & Balthazard, 2002). Individuals prefer interaction with other individuals as compared to interaction with tools and databases (Cross & Parker, 2004), thus, leaders must be cognizant of the human aspects of interaction.

## **THE ROLE OF THE ORGANIZATIONAL SYSTEM IN VIRTUAL TEAMS**

The organizational system and the leader are critical to the success of virtual teams (Avolio & Kahai, 2003), as virtual teams are “not a simple re-creation of a physical form into a digital form” (Prasad & Akhilesh, 2002, p. 105). Organizational and leadership issues that must be addressed include clarity, strategy, structure, boundaries, objectives, rewards, explicit processes and norms, culture, and training (Stevenson & McGrath, 2004). The culture of face-to-face teams cannot just be transferred to the virtual team environment, because traditional teams have established norms about communication and interaction that do not apply in virtual teams.

Virtual teams will involve more cultures that are diverse, and teams with cultural differences will take longer to bond (Gassman & Zedtwitz, 2003). Within virtual teams that cross cultural or organizational boundaries, the roles and boundaries become blurry and team members are pulled in different directions

(Malhotra & Majchrzak, 2004). Virtual teams may need special training for working in a virtual environment (Yoo & Alavi, 2004).

Virtual leaders must redefine some behaviors and spend more time on relationship building than face-to-face leaders, primarily due to the communication and interaction differences of virtual teams (Hart & McLeod, 2003). Avolio and Kahai (2003) suggest that the role of leadership is migrating to lower levels in the organization as the followers know more, and know it sooner. Leadership may be the key to the overall effectiveness of virtual teams; however, more research is needed in this area to understand the leadership behaviors and the organizational system that will create effective virtual teams. In summary, virtual teams are often compared with traditional teams, yet the two forms of teams are different in many regards (Stevenson & McGrath, 2004).

## **FUTURE TRENDS**

As a new organizational form, defined by a relatively new type of interaction, virtual teams need a significant amount of research to understand their organizational and leadership elements. Many organizations do not realize that virtual teams require special attention or special leadership behaviors, especially for long-term virtual teams that are part of today’s hypercompetitive, global environment. Research is needed to determine if previous studies on traditional teams and face-to-face leadership will generalize to the virtual team environment, because previous leadership models to date have not been tested in virtual environments. Many questions remain, such as determining what leadership behaviors are effective in virtual teams and what the antecedents to trust, effective communications, and effective interaction within virtual teams are. We need to understand the norms and processes that are unique to virtual teams, and which ones are effective. Finally, what specific training and preparation is needed for the special environment of virtual teams? Such questions need to be answered in order to advance our understanding of how virtual teams operate. As a recent organizational form, virtual teams are an opportunity for researchers and practitioners to come together and create new knowledge about organizations and leadership (Bunker, Alban, & Lewicki, 2004).



## CONCLUSION

This article reviews the organizational and leadership issues within virtual teams. A comprehensive analysis of the literature revealed four main aspects in the literature; trust, communication, interaction, and the role of the organizational system. Leaders must understand that ICT is not the primary issue regarding virtual teams (Gabriele, Anne, & Blake, 2004), and that a better understanding of social, behavioral, and leadership issues is required to develop effective virtual teams. Virtual teams need high levels of trust, communication, interaction, and interdependence (Hertel, Konradt, & Orlikowski, 2004). They also need shared goals, (Kirschner & van Bruggen, 2004), a focus on objectives (Kerber & Buono, 2004), explicit norms and expectations (Malhotra & Majchrzak, 2004) and an organizational system that is embedded in a supportive culture (Furst, Reeves, Rosen, & Blackburn, 2004). Leaders must value the attributes and behaviors that enable trust, communication, and interaction among virtual team members, while creating an organizational system that supports virtual teams.

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## TERMS AND DEFINITIONS

**Virtual teams:** Teams who primarily conduct their work through electronic media.

**Globalization:** A set of processes leading to the integration of economic, cultural, political, and social systems across geographical boundaries.

**Collaboration:** Occurs when two or more people interact and exchange knowledge in pursuit of a shared, collective, bounded goal.

**Trust:** The willingness to be vulnerable irrespective of the ability to monitor or control that other party.

**Communication:** The complex transfer of ideas, attitudes, and information.

**Leadership:** A process whereby an individual influences a group of individuals to achieve a common goal.

**Organizational system:** Includes the leader, structure, culture, and processes of an organization.

