

VIRTUAL LEADERSHIP: REQUIRED COMPETENCIES FOR EFFECTIVE LEADERS

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There are countless books, articles, and resources available which attempt to identify the competencies and qualities of effective leaders. Traditionally, leaders have been at the center of a community, be it work, church, or social groups. In these communities, face-to-face meetings and close personal interaction have dominated the way leaders interact with their members. However, with the advent of the internet and the host of communication tools that followed, teams today are becoming increasingly dispersed and diverse. Studies are now being done to understand how leadership has or should evolve in order to meet the changing needs and demands of these new and different communities. Some argue that leadership in the virtual environment is simpler as fewer tools are available to virtual leaders. Others may argue that access to fewer tools makes virtual leadership more complex and challenging than traditional leadership.

This paper will explore leadership in virtual settings and how it's changing as more teams move away from traditional team environments. I'll review the responsibilities and roles of virtual leaders in an effort to better highlight the core competencies needed in today's virtual settings. I'll also look at competencies required of global virtual leaders and I'll address how these competencies can be cultivated to ensure leaders are more effective in leading teams in these new environments.

Basic Roles and Responsibilities of Virtual Leaders

To understand the competencies required by virtual leaders, it's important to first understand how a virtual leader's role differs from that of a traditional leader, who operates in close proximity to his or her team. Some may question whether a difference exists at all, but the research suggests that virtual roles can become complicated. In the early 1990's, an experiment was conducted in which computer-supported teams were developed and studied to determine what roles emerge in this new environment. Researchers found that more than half of the participants felt the software had fulfilled many leadership roles including those of recorder, gatekeeper, process driver and, maybe most interesting, motivator (Zigurs, 2003). Thus we see how leadership roles can transform or shift when technology and group dynamics change.

When a new virtual team is created, it typically begins as nothing more than a collection of individuals. The leader's role from the start is to develop these individuals into a coherent and well integrated work unit that provides the capability for the team to self manage itself. To achieve this, leaders must create a team orientation, which includes motivational factors like promoting a common goal, creating positive affect and shaping perceptions. A team orientation represents the bond that ties members to each other and the team mission. Once this environment is created, there are two leadership functions, performance management and team development (Hunsaker & Hunsaker, 2008).

According to another source, there are three roles for a virtual leader. The first is that of a team liaison who continually scans and interprets team events and the overall environment. The second role is a direction setter who ensures that all actions have a specified purpose that is in line with the team's overall goals. Finally, leaders must be the operational coordinator. This includes identifying or developing the right resources to tackle problems or tasks. It also includes motivating and empowering employees to encourage greater effort towards tasks and, therefore, minimize process losses. One could argue that these roles are not very different from traditional ones but each of these must be carried out in virtual team settings and they must be done with limited communications (Zaccaro & Bader, 2003).

Unique Challenges of Virtual Team Leadership

Understanding the challenges or differences in virtual teams, compared with traditional teams, is the key to better understanding what a virtual leader should look like and what knowledge, skills, and abilities (KSA's) are required to be effective. The most obvious difference is that virtual environments are stripped of much of the information richness available to teams in face-to-face settings (Brake, 2006). Without access to familiar face-to-face methods, teams are left with a variety of technological replacements, from blogs, wiki's and email to more advanced tools like Telepresence.

The increased distance between team members gives rise to a host of new issues. According to one source and consistent with much of the research done on this topic, there are 5 main disadvantages to a virtual team: lack of physical interaction, loss of face to face synergies, lack of trust, greater concern with predictability and reliability, and lack of social interaction (Cascio & Shurygailo, 2003). Of these, perhaps the most studied and written about challenge that arises in virtual settings is trust. Trust is important to the success of any team but the issue becomes increasingly complex in a virtual setting.

One model suggests there are 3 stages of trust (Zaccaro & Bader, 2003). The first stage is calculus-based trust and is developed when new teams are formed and members recognize the benefit of working together. While little is known about each individual, members trust others will act responsibly and consistently across team situations. The second stage is knowledge-based trust, which emerges as members come to know each other better and are able to anticipate the actions or behaviors of others. Member KSA's become more easily identified and the best ways of approaching people become clearer. The final stage is identification-based trust. This stage is the deepest form of trust and develops as members begin to share the same values, goals, and intentions. Thus, reaching this level may not be possible in teams assembled for shorter durations. In another study, participants estimated that confidence in new team members' performance and behavior was established within a range of 3 to 9 months (Oertig & Buergi, 2006). When given time to develop, this deeper level of trust can offer greater unity in terms of perceptions and future direction. Additionally, without this level of trust, e-teams are subject to greater losses due to communication inefficiencies (Zaccaro & Bader, 2003).

The loss of physical interaction, face to face synergies, and social interaction also slows down the trust building process. Team members are likely to share less about themselves through electronic channels. The more personal the information, the more likely they are to share it through only face-to-face channels (Zaccaro & Bader, 2003). This is because people seek out the non-verbal cues that are associated with in-person communication. These losses also complicate the rebuilding of trust. The resolution of broken trust is often extremely difficult and time consuming when a leader has only technological tools, such as email, at their disposal (Zaccaro & Bader, 2003).

The relatively short duration of many virtual team assignments also complicates the trust building process. When teams are formed for short periods of time, swift trust, or trust based on assumptions and initial interactions, becomes critical to team effectiveness. One study explains that this form of trust is extremely fragile, temporal and that its occurrence is dependent upon early communication behaviors of the members, but that it can also be resilient enough to extend through the life of the temporary group (Panteli & Duncan, 2004). Leaders that incorporate a significant “getting to know you” component and, if possible, a face-to-meeting, can also help establish swift trust by connecting everyone at the start of a project. When this isn’t possible, the incorporation of pictures and biographies can help (Brake, 2006). Ultimately, trust must come quickly or it may not come at all (Avolio & Kahai, 2003).

Virtual teams also present greater complexity due to expanded geographies and time zones, new cultures, different laws, regulations, and business processes. Diversity is one of many complexities that are often a byproduct of the virtual environment because geographical boundaries disappear. Whether teams expand across a city, country, or continent, diversity ensues and should be an important consideration of virtual leaders as it may require different communication methods and project strategies. One report identified four necessary components of effective leadership when working in culturally diverse settings. First, a knowledge base which increases sensitivity to and awareness of the diversities in the workforce. Second, identification of resources which can strengthen and improve the quality of life for diverse individuals. Third, open communication with others about cultural differences. Fourth, strategies which will enable leaders to serve as change agents to maximize the benefits of a culturally diverse workforce (McCuiston et al., 2004).

Finally, one of the most significant challenges a virtual leader faces is the integration of their personal life with the demands of a virtual team. Having team members spread across time zones requires significant planning and may include early morning or late night conference calls. Additionally, as more and more virtual teams work from home, integrating work and family matters can be difficult.

Virtual Leadership Competencies

Communication

Virtual leadership competencies arise from the responsibilities, roles, and challenges of a virtual leader. While some of the competencies identified in the research are important to any leadership setting, how a leader responds in a virtual environment may be very different. For example, the

ability to communicate effectively is a core competency for any leader but especially for a virtual leader who is limited to communication through technology. In a Conference Board study on the competencies of effective remote managers, they identified the cultivating of relationships as a top managerial competency. According to their report, these managers communicate frequently, are relationship focused, inclusive, supportive and encouraging of collaboration (Linkow, 2008). This highlights many of the more specific competencies required of effective virtual leaders.

Frequency of communication, including a leader's responsiveness to questions and problems is central to effective communication. The US military, known for their relatively hierarchical structure, is being forced to change the way they communicate due to the increased access employees have to alternative and sometimes conflicting information. To avoid confusion and efficiency losses due to multiple information sources, they have been pushed to disseminate information more rapidly and then to follow-up and ensure that the information is both received and understood (Avolio & Kahai, 2003).

In conjunction with frequent communication and follow-up, virtual leaders must be able to provide team direction that is clear and set individual goals and objectives that team members understand. Clear direction and goals enhance individual self regulation and allow team members to monitor and evaluate their own performance.¹ Providing such clarity is arguably more difficult in a virtual setting and is therefore of significant importance.

One aspect of communication commonly forgotten but potentially most valuable is a virtual leader's ability to listen and hear what cannot be seen. An awareness of the team, its overall mission, its strengths, weakness, and group dynamics is important to managing effectively. According to one researcher, there are 4 types of awareness needed for team synergy: Activity awareness which includes awareness of team members and their projects; Availability awareness or knowing team members schedules; Process awareness involving an understanding of the project sequence and how individuals tasks fit in to the overall project; and Social awareness which includes knowledge about team members and their social environments (Hunsaker & Hunsaker, 2008).

Not only do leaders need to have this awareness but they also need to create awareness in the team. A lack of awareness in either the work that remote team members are doing, their availability, their deadlines, or how they feel about an idea or direction can lead to ineffective outcomes and a loss of group synergies (Hunsaker & Hunsaker, 2008). Virtual leaders must be able to carefully assess group dynamics and make adjustments based on the findings they gain through observation, listening and regular assessment of group dynamics.

One final requirement for effective communication is a leader's ability to utilize the technology available, and, when necessary, to educate the team on their proper uses. Leadership in virtual teams is expressed through technology. As a result, leaders and team members must be able to make sense of these tools in order to make the most use of them (Zigurs, 2003). Which tools a leaders chooses to use should be aligned with their efforts to improve performance, develop team relationships, and communicate important project related information.

Personal Attributes and Trust Building

Another category of competencies that are critical for success in virtual leadership include personal attributes or qualities. A few key attributes or competencies highlighted in the research include open-mindedness, flexibility, interest in and sensitivity toward other cultures, ability to deal with complexity, resilience, optimism, energy, and honesty. (Kramer, 2005) These qualities allow a virtual leaders to work in complex and unique environments where change is constant and where group challenges, process complications, and project setbacks might be more common-place than for traditional co-located teams.

These personal attributes are also important for the trust building process, especially when diversity and distance increase. The ability to build trust is an absolutely essential role required of a virtual leader or any leader. Incorporating these attributes, especially honesty, open-mindedness, cultural sensitivity, and optimism will aid in the creation of a trusting environment. A heightened awareness of team dynamics and context are critical in understanding how to build and maintain this trust.

Additional Competencies for Global Leaders

Not all virtual leadership roles are equal. By adding complexities that are global in nature, the competencies needed to lead and succeed grow in number. Leaders in these environments must learn to deal with greater logistical complexities, inter-company coordination, and must also account for significant country and cultural differences (Kramer, 2005). These challenges may even arise in non-global roles where significant levels of diversity are present.

In a Conference Board report, seven key competencies aimed at global leadership were identified. Again, these appear to be consistent across much of the research on global leadership, which arguably always consists of virtual components. First, global leaders must be open minded and flexible in thought. This allows them to work in a variety of settings, with diverse types of people and with a willingness to listen to new ideas. Second, global leaders should have an interest and sensitivity in new cultures. A healthy curiosity about people, their lives and work that is void of judgment will allow them to be empathetic and get along well with others. Third, global leaders must be able to deal with complexity and be prepared to make decisions that encompass multiple variables, considerable ambiguity, and evolving environments. Fourth, leaders must be resilient, resourceful, optimistic, and energetic. Creativity and positive attitudes will allow leaders to take on important challenges and high levels of physical and emotional energy will keep them from getting discouraged. Fifth, leaders must maintain honesty and integrity. Without this ability, the critical component of trust is impossible to develop and maintain. Sixth, leaders must have a stable personal life and, when applicable, a family that supports a global commitment to work. Finally, leaders must bring value added technical or business skills that lend credibility to their role (Kramer, 2005).

This report goes into further detail regarding the importance of learning skills and learning agility. It identifies the two most important learning skills in global leadership; the ability to build relationships with others and valuing people of different cultures. These skills contribute to emotional intelligence and highlight the fact that success in a global setting stems more from interpersonal understanding than from analytical abilities. Similarly, learning agility is composed of two competencies; the enthusiasm and ability to learn and the application of that learning to other situations. Many researchers have shown that leadership failures result from a lack of learning agility.

Supporting Findings through a Virtual Leadership Study

In a research study developed to assess virtual team effectiveness, 13 virtual teams, composed of 5-7 team members from three universities located in Europe, Mexico and the US, were formed. A project was assigned and at the completion of the project, leaders were asked to assess themselves and their team. Teams were asked to assess their leader and overall experience (Kayworth & Leidner, 2002).

The findings from this study clearly provide support for the competencies outlined in this paper. When assessing their leader's effectiveness in communicating, teams expressed dissatisfaction with leaders that did not promptly respond to questions or who didn't acknowledge suggestions. Other complaints arose around leaders who were too vague and lacked detail in assigning tasks. Leaders who lacked empathy or who were less open to opposing views also received negative feedback. While teams wanted an assertive leader, they expressed dissatisfaction in leaders who were too bossy or had an attitude of superiority. Three low scoring leaders were said to be either too arrogant or too timid, suggesting that a happy medium is important. Finally, many teams felt hampered by dysfunctional technology, especially when leaders failed to make needed adjustments around its appropriate use.

Effective leaders, based on team feedback, were those who were responsive to project issues and questions. These leaders were said to be good listeners, understanding and sensitive to schedules and team opinions. Highly rated leaders in the study were those who took control of the technology by developing home pages where project information, outlines, and timelines were kept. Teams also enjoyed leaders who conducted regular team meetings and found that relationships were strengthened and trust was built through them.

The team that rated their leader highest had a seemingly good experience overall. This leader began the project with a group chat that was optimistic and fun and which got the team moving in the same direction. Through the use of multiple forms of technology, he established the communication patterns early, prepared agendas, and offered a project plan. As with many leaders, he had difficulties with the contribution of some team members but didn't place blame or speak ill about these students. Instead, he explained to members that language and technology were the key factors for the difficulties. Thus, we see the incorporation of effective communication, respected personal traits, and the effective building of team trust.

Developing Global and/or Virtual Leaders

Training and development of future leaders, specifically those leaders who lead in virtual settings, needs to more specifically address the unique challenges of e-leadership and must incorporate training design tools that actively reflect these challenges.³ Leaders should then be assessed to see where gaps exist and where training and development can be used to close these gaps.

One common practice in developing global leaders is providing them with international experiences during the early stages of their career. In one survey, only 12% of companies reported sending their global leadership talent overseas during the first five years of employment. However, 41% of these companies claim to use early overseas experience in talent development (Kramer, 2005). This highlights the fact that overseas assignments are not the only way to provide global insights or “international” experience. By being a part of global teams, members may begin to understand global issues, culture, complexities, and their own weaknesses and address them earlier.

Another key component of developing global leaders involves providing oversight, support and feedback. Additionally, minimizing the consequences of underperformance can be important. The reason for this is that the incidents of underperformance or even failure in many global assignments are relatively high (Kramer, 2005). By providing support and offering some room for error, leaders are likely to feel freer to grow steadily into the role and learn as they go. With the right support system in place, they are also able to access leadership who can assist with challenges they may face.

Stretch Assignments are another way to push people beyond their actual or perceived limits and therefore provide powerful learning opportunities. Citigroup, Goldman Sachs and many other organizations use these experiences to see how well candidates can perform complex tasks that are central to the business (Kramer, 2005).

Finally, research suggests providing employees with opportunities to reflect upon assignments and learn, both before the assignment and after. Communicating big assignments well in advance of the start date can offer valuable time to reflect on the meaning and needs of the job. Similarly, if structured time either individually or within a group is given to those finishing complex assignment, they are able to garner additional insight and learning. Research has shown that learning is reinforced though such reflection (Kramer, 2005).

Conclusion

It may not yet be clear just how simple or complex virtual leadership is, relative to traditional face-to-face leadership, but understanding the roles and competencies of virtual leaders is vital to virtual team effectiveness. While the leadership characteristics highlighted in this paper may be very important to traditional leadership roles, they may not be as important or may not manifest in the same way in a virtual setting. A leader that communicates effectively in face-to-face settings may not be as capable in a virtual environment. A leader that is able to establish trust locally may not be able to do so virtually. Leaders must understand the challenges faced by virtual teams and must invest increased effort to ensure teams are using their resources to accomplish their team objective

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Annotated Bibliography

Avolio, B. J., & Kahai, S. S., (2003). Adding the “E” to E-Leadership: How it May Impact Your Leadership. *Organizational Dynamics*, 31(4), 325-338.

Abstract: Over the last decade, a quiet revolution has been taking shape in organizations around the world. This revolution involves the wiring of organizations so that many significant human interactions are now mediated by information technology. Today, leaders may lead entire projects from a distance and interact with followers or team members solely through information technology. What are the implications for leaders and followers in teams and organizations where interactions are now mediated by information technology? How does the technology affect motivation and performance? How should we develop leaders to work in this new environment? What does “having a presence” mean, when the leader is projected into the work group via technology? In this first article, we will define and explore the concept of e-leadership. Our goal is to focus the reader on the range of issues that you may want to consider as you get more involved in working with people at a distance through advanced information technology. We begin our discussion with a brief definition of e-leadership, followed by some unintended consequences of its use in real-life settings.

Brake, T. (2006). Leading Global Virtual Teams. *Industrial and Commercial Training*, 38(3), 116-121.

Abstract: A new workplace is evolving. One in which people – often working in different parts of the globe – interact and collaborate through increasingly sophisticated information and communication technologies (ICTs) such as intranets, web meetings, videoconferencing, teleconferencing, instant messaging, application sharing, and e-mail. These technologies enable us to work in a “virtual” mode, but what does that mean, and how do we lead successfully in such an environment?

Cascio, W. F., & Shurygailo, S. (2003). E-Leadership and Virtual Team. *Organizational Dynamics*, 31(4), 362-376.

Abstract: Explores the developmental and functional needs of virtual teams, traces growth in the number of virtual teams, and in the extent of their tasks and objectives, classifies teams according to their number of locations and managers, and illustrates a model that includes tele-workers, remote teams, matrixed team-workers and matrixed remote teams. Looks at the problems facing virtual teams in the planning and management of their projects, discussing leadership, task boundaries, proactive and reactive projects, and communication controls. Provides advice on how to organize and conduct virtual meetings, and deal with changes in communication style, explains how to manage tele-working teams and employees, and covers the establishment of trust in both new and existing teams, supporting the advice and explanations with actual examples. Comments

on training for both managers and team members, mentions cross-cultural management, and underlines that in virtual teams there is little tolerance for ineffective leadership.

Hunsaker, P. L., & Hunsaker, J. S. (2008). *Virtual Teams: A Leaders Guide. Team Performance Management, 14(1/2), 86-101.*

Abstract: In recent years, activities in all types of organizations have become increasingly more global, competition from both foreign and domestic sources has grown dramatically, and there has been a continued shift from production to service/knowledge-based work environments (Townsend *et al.*, 1998). Advances in information and communication technology have enabled a faster pace of change than in the past and have created jobs that are increasingly more complex and dynamic. In response to these changes, organizational systems, structures, and processes have evolved to become more flexible and adaptive. Horizontal organizational structures and team-based work units have become more prevalent, and with advances in internet technology there is an increasing emphasis on geographically distributed “virtual” teams as organizing units of work. *Virtual teams* are groups of geographically and/or organizationally dispersed co-workers that are assembled using a combination of telecommunications and information technologies to accomplish an organizational task (Malhotra *et al.*, 2007).

Kayworth, T. R., & Leidner, D. E., (2002). *Leadership Effectiveness in Global Virtual Teams. Journal of Management Information Systems, 18(3), 7-40.*

Abstract: The trend toward physically dispersed work groups has necessitated a fresh inquiry into the role and nature of team leadership in virtual settings. To accomplish this, we assembled thirteen culturally diverse global teams from locations in Europe, Mexico, and the United States, assigning each team a project leader and task to complete. The findings suggest that effective team leaders demonstrate the capability to deal with paradox and contradiction by performing multiple leadership roles simultaneously (behavioral complexity). Specifically, we discovered that highly effective virtual team leaders act in a mentoring role and exhibit a high degree of understanding (empathy) toward other team members. At the same time, effective leaders are also able to assert their authority without being perceived as overbearing or inflexible. Finally, effective leaders are found to be extremely effective at providing regular, detailed, and prompt communication with their peers and in articulating role relationships (responsibilities) among the virtual team members. This study provides useful insights for managers interested in developing global virtual teams, as well as for academics interested in pursuing virtual team research.

Kramer, R. J. (2005). *Developing Global Leaders: Enhancing Competencies and Accelerating the Expatriate Experience. The Conference Board.*

Abstract: Based on a Conference Board survey of 81 executives and interviews with global leadership and executive development staff members, *Developing Global Leaders* seeks to present this formidable subject in a way that is useful to both executives and leadership development staff in multinational corporations. The report focuses on three operational questions raised by

corporate members of the Conference Board's Global Leadership Development Working Group at its 2004 inaugural meeting: 1, is it possible to improve the chances that talent learns what is necessary from an expatriate experience? 2, what are some effective approaches of moving talent across organizational silos of businesses, geographies, and functions for developmental purposes? 3, can the global leadership development process be accelerated, or is extra time required to turn an individual with domestic business skills into an accomplished global executive?

Linkow, P. R. (2008). *Meeting the Challenges of a Dispersed Workforce: Managing Across Language, Culture, Time, and Location*. The Conference Board.

Abstract: The Conference Board established the Research Working Group on Managing a Distant Workforce to explore the organizational, managerial, and individual challenges of managing across different languages, cultures, time zones, and locations and to identify effective approaches for addressing those challenges. To do so, managers and employees in five companies—Bechtel, DuPont de Nemours International, Eli Lilly, Target Sourcing Services/AMC, and Sybase—were surveyed. To elaborate on some of the issues raised by the survey and to better understand how top managers are addressing them, a small number of interviews and focus groups were conducted with high performing distance managers and their teams. The findings are grouped under seven headings: The Payoff from Effective Distance Management; The Competencies of Effective Distance Managers; Selecting and Developing Employees for Distance Work; Managing Across Differences in Languages, Cultures, and Time Zones; Managing Relationships and Connections; Evaluating Distance Employees; Building Distance Teams; and Developing Distance Managers. The final section includes ten action steps based on the findings.

McCuiston, V. E., Wooldrige, B.R., Pierce, C. K., (2004). *Leading the diverse workforce. Leadership & Organization Development, 25(1), 73-92*

Abstract: US demographers predict that women, people of color and ethnic minorities will represent over 50 percent of all new entrants to the US workforce by 2008. This shift in demographics plus the pressure from a growing competitive global marketplace are forcing organizations to rethink models of business success. The authors describe how organizations can ensure their readiness to effectively align business strategies with today's demographic and market realities to achieve growth, profitability, and sustainability. This study updates the literature by connecting the leadership literature with diversity research. The theory development of this study reviewed the progress made and the future prospects and potential profits for US businesses in leading today's diverse workforce. Findings from interviews and focus groups with senior executives, representing a cross section of American industries, led to best practices recommendations for capitalizing on the strategic benefits of diversity.

Oertig, M., & Buergi, T. (2006). *The Challenges of Managing Cross-Cultural Virtual Project Teams. Team Performance Management, 12(1/2), 23-30*.

Abstract: Globalisation has led to many changes in the nature of project team work. Many international companies have projects spanning a variety of nationalities, involving great geographical distance and a range of time zones. Academic scholarship has reported on the increasing number of geographically distributed project teams working within matrix organisations, and it is assumed that their work is very difficult. Scholars report that matrix forms are hard to manage and diversity has been known to lead to poor performing teams (Iles and Kaur Hayers, 1997). Virtual teamwork is more complex than working face-to-face (Heimer and Vince, 1998) and site specific cultures and lack of familiarity are reported to be sources of conflict (Hinds and Bailey, 2003). Vakola and Wilson (2004) warn that the importance of the human element and the way that people co-operate with each other should not be taken for granted. This study aims to investigate the perceptions of project leaders at the cutting edge of this virtual trend. This paper presents an empirically-based study of the perspectives of project leaders in ABC, a multinational company with headquarters in Switzerland, on the greatest challenges they have to manage when leading cross-cultural virtual project teams.

Panteli, N., & Duncan E., (2004). Trust and temporary virtual teams: alternative explanations and dramaturgical relationships. *Information Technology & People*, 17(4), 423-441.

Abstract: The paper uses the dramaturgical perspective for conceptualising trust development within temporary virtual teams. The underlying assumption is that temporary teams do not have the luxury of time that, according to the traditional trust theories, enables familiarity among team members and promotes trust development. Yet, in these teams, trust needs to develop quickly and it is important that it lasts throughout the short duration of the project lifecycle. Using the metaphor of a theatre, a dramaturgical perspective on trust relationships is adopted and is used to present actors, co-actors and audience as all playing a key role in scripting, staging and performing virtual plays. The dramaturgical perspective provides an illustrative approach for uncovering the interactions between key players. As it is argued, these interactions elicit the process of trust development within the temporary setting of virtual teams, constituting a type of trust relationship that is mutually negotiated and jointly constructed. This type of trust is called “situated” and emerges from the scripted, pre-scripted, co-scripted, re-scripted and unscripted computer-mediated interactions of virtual players. The implications for theory and practice are discussed.

Zaccaro, S. J., & Bader, P. (2003). E-Leadership and the Challenges of Leading E-Teams: Minimizing the Bad and Maximizing the Good. *Organizational Dynamics*, 31(4), 377-387.

Abstract: The article categorizes types of virtual teams and identifies each type's associated issues in order to layout a typology for leadership challenges. Statistics on the number of virtual teams operating at any given time are unavailable. On the other hand, the number of teleworkers, many of whom are also members of virtual teams, has been growing rapidly. Fully one in five U.S. employees, nearly 30 million people, currently participates in some form of teleworking arrangement at home, on the road, in telework centers, or in satellite offices. The typical teleworker

works at least one full day per week away from the traditional office, lives in the Northeast or western United States, has a college education, is 35 to 44 years of age, and is married. Such arrangements are found most often either at very small or very large companies. Teleworkers often hold managerial or sales positions and earn \$40,000 or more annually. Worldwide, by the end of 2003 it is estimated that 137 million workers will telework at least on a part-time basis. Survey results indicate that employees want more opportunities to telework, and that their top priority is to gain the flexibility to control their own time.

Zigurs, I. (2003). Leadership in Virtual Teams: Oxymoron or Opportunity?
Organizational Dynamics, 31(4), 339-351.

Abstract: Asks what is the role of a leader in a virtual team, and what are the effects of technology on leadership, and vice-versa. Defines a virtual team as a collection of geographically and/or organizationally dispersed individuals who collaborate via communication and information technologies to achieve a specific goal, mentions cultural and temporal dispersion, and discusses work context, different levels of virtualness, and the difficulties of meeting demanding timescales when team members are dispersed. Discusses different types of virtual leadership, i.e. formal, informal, coach and facilitator, and the different roles that can be assumed by team members, e.g. proceduralist, explainer, and mediator, debates the fulfilment of these roles by communication and information software, and suggests how leaders can project their presence in virtual team situations. Recommends specialist training for participating in virtual teams, establishing communicational standards, structuring team processes, and use of frequent communication to develop emergent and self-leadership.