

Leading Virtual Teams: Three Cases

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This study investigated virtual team members' and leaders' perceptions of the role of the leader, and hindering and helping forces within virtual teams and their host organizations for developing leaders of such teams. It addresses the expressed need of virtual team leaders for the field of HRD to guide leadership development for this emerging organizational form. In response this study situates leadership requirements, identified by the participants, within an overall developmental context.

Keywords: Virtual Teams, Leadership, Multi-site Case Study Research

More than twenty years ago, the term 'virtual teams' began to appear in the literature as the result of the intersection of two important trends: globalization and information technology development (Joy-Matthews and Gladstone, 2000). Specifically, virtual teams were found to be the answer to the mounting worldwide economic pressures of the 1980s, while the technology was increasingly available to support virtual teams, even across continents. Synchronous and asynchronous chats, audio and video conferencing, voicemail, corporate email-based intranets, and the worldwide web enabled virtual team communication. Initially the cost pressures of travel, especially air travel, increased the appeal of virtual teams. As organizational experience deepens, team members and leaders have expressed with some frustration, that, "We are making this [how to function effectively] up as we go along" (Johnson & Jeris, 2003, p. 959). This study focuses specifically on what kind of leadership is required for this organizational phenomenon. Is it the same as, or different from that required in face-to-face teams. If it is different, how are virtual teams leaders developmental needs presently met and how do the primary stakeholders describe the ideal development process for future virtual team leaders?

Research Questions

The purpose of this research project was to examine the leadership required in virtual teams. Our central research question was: what specific leadership behaviors, competencies, skills, and attributes contribute to virtual team effectiveness? Our two supporting research questions were:

1. From the perspectives of the leader, and the team members, what are the effective and ineffective leadership behaviors, competencies, skills, and attributes found in virtual teams?
2. What helping and hindering forces to effective leadership exist in virtual teams, and their organizations, and what is currently being done or can to done in the future to enhance strengths and overcome barriers?

Literature Review

This research project targeted virtual team leaders and team members' perceptions of the leadership required for improving team performance. For this research project, we operationally defined the virtual team as: *Two or more people who must interact in order to reach a common goal, and are primarily dependant upon electronic communication because they are not geographically co-located.*

Effective Performance of Virtual Teams

Current research findings can be arranged along a continuum of thought regarding the effective performance of virtual teams. At one end there is evidence to suggest that virtual teams are no different from teams working together, face-to-face, every day. For example, Chase's (1999) study revealed that a "virtual team is just like any other team, only more so" (p.76). Moving slightly along the continuum in the direction of difference is the work of Leury and Raisingham (2000), who found that at least some aspects fostering effectiveness in virtual teams remain unchanged for non-virtual teams and posited that, "Organizations choosing to implement virtual teams should focus much of their efforts in the same direction they would in they were implementing traditional, co-located teams" (p. 532).

A third view moves dramatically toward the opposite perspective and findings indicate that virtual teams are vastly different from face-to-face teams. Joy-Matthews and Gladstone (2000) suggested that practitioners pay attention to the following four discussion points: selection of members, essentiality of proximate contact, employee responses to the virtual structure, and changes in the corporate intranet. Others (Montoya-Weiss, Massey, and Song, 2001) argued that a temporal coordination mechanism is essential to managing conflict in a virtual team. Solomon (2001) asserted that managers of virtual teams need proper communication technology, a clear understanding of the needs of the team, a sense of shared space, and offered nine tips for success. Lipnack and Stamps (1999) proposed that virtual teams have three facets that must be considered: purpose, people, and links. Kelley (2001) cited a study by Maznevski and Chudoba that suggested two pivotal themes in virtual team performance and effectiveness. First, their research indicated that virtual team dynamics were comprised of a series of critical incidents. And second, these incidents had a repeating pattern over time.

In summary, Colky's recent research (2002) seemed to capture the essence of the work to date on the effectiveness of virtual teams. She found that three factors contributed to virtual team performance: communication, trust, and collaborative learning. At first blush, these elements may strike the reader as restating the obvious. We make that proposition because we experienced that same pessimism. Interestingly, when our interview subjects talked about trust, communication, and collaborative learning, they brought them into the conversation with various exclamations indicating that these ideas have been around a long time. We found that these dimensions served as a starting point for a theoretical framework; we subsequently employed them as conceptual map in our case descriptions. In this way we hope to build on Colky's themes and use them as the framework to help us understand the ways in which leadership must deliver these variables to the virtual team.

Communication

The first factor that Colky (2002) described as a key determinant of effective virtual team performance was communication. Potter, Cooke, and Balthazard (2000) wrote that communication is critical to effective teamwork, while being inherently difficult. In virtual teams these non-verbal aspects of communication may be absent and team members must often rely on words alone. Van der Smagt (2000, p.149) indicated that this lack of face-to-face contact places "new and divergent demands" on communication in virtual teams, and that teams must manage the communication processes in new and different ways. To accomplish this, Larouche and Bing (2001) suggested a list of guidelines that virtual teams should follow to help in this: Sending meeting agenda and documents prior to team meetings, member introductions at meetings, and continuous clarification are but a few of his recommendations.

Trust

Colky (2002) identified trust as the second factor in effective, high-performance virtual teams. According to Jarvenpaa, Knoll, and Leidner (1998), "trust is critical in new organizational arrangements where the traditional social controls do not exist, and lies at the heart of success. Once again, virtual teams encounter new processes and are challenged by their very structure and nature to find new ways of operating" (p. 29). Platt (1999) wrote that "trust takes time to build, but no time at all to destroy" (p. 41), and asserted that competence and integrity underlie trust on virtual teams.

Collaborative Learning

The final factor that emerged from Colky's (2002) research was collaborative learning, also described in the literature as cooperative learning and team learning. A recent issue of *Advances in Developing Human Resources*, 5 (1), focused on cross-cultural aspects of team learning. Since two of the cases presented here were international in scope, we found this examination very helpful. However, much the same way that Hofstede's (1980) work was criticized by Jaeger (1986) for limiting his study to a single organization creating the potential for confusing organizational and national cultures, we bring the same concern to the study of virtual teams. Although face-to-face teams and virtual teams confront similar issues in terms of meeting performance objectives, understanding the unique learning context of virtual teams is so undeveloped at this point that to assume what we know about team learning applies equally to face-to-face and virtual teams is clearly premature.

Leadership

How does leadership foster these three factors in virtual teams? What exactly is leadership? Heilbrun (1994) pointed out that rigorous study of the leadership phenomenon began with the work of sociologist Max Weber in the early part of this century and that the study of leadership can be divided into three stages. The earliest stage attempted was to identify traits of leaders, the next stage focused on the behavior of leaders, and the third and current stage centers on the interactions between leaders and those they lead. Heilbrun (1994) went on to say that the future of leadership studies might lie in the understanding that the most significant aspects of leadership lie far beyond the ability to study them.

Many hundreds or even thousands of definitions of leadership exist, ranging from the abstract to the simple. Locke, Kirkpatrick, Wheeler, Schneider, Niles, Goldstein, Welsh, & Chah, (1991) offered one definition: "We define

leadership as the process of inducing others to take action toward a common goal" (p. 2). Bethel (1990) proposed a more precise definition of leadership as simply "influencing others" (p. 6), and Loeb (1994) stated that "leaders ask the what and why questions, not the how question" (p. 242).

While there is no one generally accepted definition of leadership, for purposes of this research project, we adopted the following operational definition of leadership: *Leadership in the process of influencing others toward the achievement of a common goal or common set of goals.*

Leadership and Virtual Teams

Precious little has been written about leading virtual teams. Switzer (2000) summarized this very well when she wrote that there "is a tremendous amount of literature on leadership, and some literature on virtual teams. Yet, there is very little research on leadership in virtual teams" (p. 3). The following brief summary reveals that research to date has primarily described current issues and problems but has not engaged participants in visioning a future for leadership development. First, Gould (1997), while indicating that "virtual teams are here to stay" (p. 163), made ten research-based recommendations for virtual team leaders. These include: make face-to face time, keep things visible, minimize communication delays, supplement text-only communication, establish group rules and norms, provide self-assessment time, recognize people, use the available technology, and learn from experience.

Second, Kayworth and Leidner (2001) reported that "effective leaders in our study were attentive to both the relational as well as the task-related features of their jobs" (p. 26).

Third, Bell and Kozlowski (2002) pointed out the multiple benefits of virtual teams, and reminded us that "they also create several leadership challenges" (p. 15). They categorized these challenges into two broad areas: performance management and team development.

Fourth, while referring to leadership as the most fundamental of virtual team dynamics, Pauleen (2002) found in his research that effective virtual team leaders exhibit the capacity to deal with paradox and contradiction. He wrote that they do this by "performing multiple leadership roles simultaneously" (p. 3). In addition, he found that effective virtual team leaders provide "regular, detailed, and prompt communication with their team members and peers" (p. 3).

And finally, Cascio and Sturymala (2003) reported that the following leadership challenges emerged from their research: the paradox of loose and tight controls, promoting close cooperation, encouraging and recognizing emerging leaders within the team, establishing norms and procedures early, establishing clear work and home boundaries. Further, they noted that "there is one fundamental issue that in many ways supercedes all others, namely, the impact on culture on E-leaders. In a broad sense, culture refers to shared norms about expected behaviors" (p. 374).

Research Design and Limitations

Stake (1995) indicated that a case is "specific, a complex, functioning thing" (p. 2). In this study, in an attempt to understand this complex functioning, several selection criteria were used to solicit participation from the research sites. First, the subjects had to be current members of a virtual team. Second, at least three individuals were to be interviewed for each case: a team leader, and two team members. Third, the virtual team's organization had to agree to be identified, although team charters and member identity remain confidential. In keeping with the virtual context, all communication with the research subjects, from recruitment to obtaining consent, to conducting the interviews was electronically mediated. Email, phone, and fax served us well; the only exception was having to resort to regular mail as a follow-up to faxed copies of the consent forms to obtain original signatures.

Data Collection and Analysis

We collected data through semi-structured, tape-recorded interviews and held closely to the interview schedule (Merriam, 1988). Interviews were audiotaped, verbatim transcriptions were made, and interview transcripts were independently coded and analyzed using constant comparison. Once the open and axial coding was complete and categories and properties were identified, we pooled the codes, again using constant comparison to derive the findings reported here. In order to minimize the effects of researcher bias, a trusted peer researcher provided feedback on the data analysis.

Site Descriptions

Three virtual teams were investigated: one each from NiSource Inc., Automatic Data Processing, Inc. (ADP), and the Academy of Human Resource Development (AHRD). NiSource Inc. is a Fortune 500 public utility holding company headquartered in Merrillville, IN. Its various operating companies engage in natural gas transmission, storage and distribution, as well as electric generation, transmission and distribution. Its operating companies deliver natural gas and electricity to nearly 3.7 million customers located within the high-demand energy corridor that runs from the Gulf Coast to New England

ADP is one of the world's largest providers of computerized transaction processing, data communications, and information-based business solutions. Headquartered in Roseland, NJ, ADP employs 40,000 people and maintains relationships with over 500,000 clients. Its annual revenues in 2002 exceeded \$7 billion. ADP's primary business lines are employer services, claims management solutions, auto and truck dealership systems, and securities processing. The digital nature of their businesses has driven them to adopt virtual teams naturally.

The Academy of Human Resource Development is a world-wide, research-focused organization whose mission is as follows: *The Academy of Human Resource Development was formed to encourage systematic study of human resource development theories, processes, and practices; to disseminate information about HRD, to encourage the application of HRD research findings, and to provide opportunities for social interaction among individuals with scholarly and professional interests in HRD from multiple disciplines and from across the globe* <www.ahrd.org>. The AHRD, in fact, operates virtually, having members and volunteer associates across the globe.

Virtual Contexts

Although we have considerable experience in case study research, the lack of face-to-face interaction and observation of the subjects' work settings placed us in uncharted territory. We found no compass in the literature on case study methods to orient us to the virtual context – not unlike the experience of virtual team members. The boundary-less nature of virtual teams is nearly antithetical to the very boundaries implied by “a case.” As a result of these paradoxes, we tried to be particularly attentive to design and protocol issues. In all cases, the phone interview was the first time the researchers actually spoke to the subjects. Still, it was important to spend some time at the beginning and end of the interviews exchanging personal anecdotes and experiences with virtual teams in a rapport-building process and, not surprisingly, we found our subjects to be very skilled in this arena.

Transferability

We surmise that there might be a virtual context, but how do we describe it, and is it transferable? Erlandson, Harris, Skipper and Allen (1993, pp. 31-33) addressed the issue of transferability and noted that the detailed description of the case, providing rich contextual cues, enables the reader of the study to consider hypotheses for application in another context. The richness of the case description provides the means through which the reader can make this determination. We submit that describing a virtual context in sufficient detail and making decisions about relevant contextual cues is difficult. In this sense we believe the transferability of our findings and conclusions (until case study research on virtual contexts becomes commonplace) to be limited.

Research Findings

Findings of this research are grouped into categories and their properties, and reported by the research question. Categories are defined for purposes of this paper as the broad, overarching terms that respondents used to organize the reports of their experiences. Properties, in this paper, are defined as more finite descriptors of behavior, competency, skill, and attributes that were uncovered. We deliberately cast a wide net with the research questions because we did not want to get into definitional quagmires over how participants described leadership. Experience tells us that people are quite able to first describe actions and, upon further cues, convey the meaning they ascribe to those actions. Consequently, the actual interview questions and cues were overwhelmingly behavioral and focused on requesting examples of incidences/actions that were representative of effective and ineffective leadership. We also grappled with responses that indicated a desire to “sound current” with the literature. In other words, we had to get past themes that have been identified in the literature such as communication, trust, and collaboration (Colky et al., 2002). While we completely respect this work (it has formed our theoretical framework), we believed our respondents experiences could further illuminate these themes.

Research question one asked *‘From the perspectives of the leader, and the team members, what are the effective and ineffective leadership behaviors, competencies, skills, and attributes found in virtual teams?’* The category we derived was *responsiveness*, which was descriptive of major elements of communication. In other words, the participants' descriptions of communication were labeled effective if they met the mental schema of responsiveness described by the following properties: availability, support, proper use of technology, and style management. One of our respondents summarized availability when he said (referring to a virtual team leader), “I knew that when I e-mailed [her] that I would get a response no later than 12 hours away but it's usually more like within an hour or two”, he said. And went on to clarify by saying, “I don't think she left her computer for two months. She took a couple of little vacations I guess you could call it and both times she stayed connected. I think she went to Europe. Yeah, she went to Europe one time. She was still connected.” When the respondents reported ineffective leadership, it was generally framed in terms of some lack of one of the properties.

Support was identified as another important attribute. One respondent said, “I think everybody really enjoys having her for a supervisor because we know, we're comfortable in knowing that she's going to back us, 99 times

out of 100.” A leader said, “I guess I would also want them to know that they’re comfortable to call or make an appointment or whatever to discuss any issues they might have or recommendations that they find, improvements or, cuz I’m not sure that is, um, you know, communicated real well to them.”

The appropriate use of technology was also deemed important. As one respondent put it, “The other piece of that is that she’s also very good about using technology to keep us informed.” Another leaders said, “I hear that the communication, the electronic communication was very effective.”

Style-management, or adapting leadership to the personality or work style of the follower was the final behavior under this property. One respondent summarized this idea when she indicated that, “she certainly knows how to deliver that in a way that is meaningful, meaningful for me.” Another said, “you run across all different kinds of people with different personalities. And she seems to be real good coping with, you know, people that are in the middle or on the extremes.”

In reviewing the category of responsiveness, which adds considerable description to the broad theme of communication, our participants reported that communication is only truly effective when it meets individual requirements for timeliness, evidence of support, skilled use of technology, and attention to the personal needs/style of the team member. In addition, it was clear from the interviews with team members that these mental schema for effective communication vary from person to person, placing a substantial burden on the leaders to enrich their knowledge of team members beyond daily electronically-mediated exchanges.

Empowerment emerged as another mediator of effective communication. Properties defining empowerment included: anticipating the team needs, role clarification, setting performance expectations, mentoring and coaching, and providing feedback. One respondent characterized anticipation of team needs by responding that she, “I think the constant with the people who were far away, keeping, building, and maintaining the rapport, and making them feel as if they were part of the team and always connected, so that there was, I, so I sort of confronted the isolation before it really happened.” Another said, “The only major difference, from my perspective, is that you cannot afford to be serendipitous. You have to be very, um, disciplined and kind of premeditated.”

Several respondents addressed the notion of role clarification. One said, “I didn’t have to get a pick and shovel to find out what I was supposed to do or who was doing what, who was responsible for it. That was all pretty well laid out.” Another said, “They need to understand when they get up in the morning exactly how their roles and responsibilities impact and affect the deliverables.”

Setting performance expectations was also cited as an important property. One respondent said, “You need to be very, very clear up front about what the vision and mission and goals and objectives and success criteria are for the team and for individual.” Supporting that thought another participant offered, “I mean it’s glaringly apparent that vision and missions objectives and measurements and metrics and processes have to be very, very clear.”

Several respondents addressed mentoring and coaching. “If we, if I, make a wrong decision, than I want her to educate me as to what should have been done.” In addition, another view was that, “perhaps working with somebody who has, who has done this role before in terms of being able to see how he’s done that and what was done to establish a more effective way of doing it.”

If *responsiveness* is the “how,” *empowerment* is the “what.” Our respondents let us know that communication from leaders was only effective if received according to the properties described above. Specifically, if that communication did not result in further development of team members’ understanding of their role, contribution to the team, vision and mission of the organization, specific suggestions for improvement provided in a positive developmental manner (mentoring, coaching, and feedback), then communication was not effective.

Team members also described concerns beyond those encompassed by the absence of properties described above. First was the notion that virtual teams leaders tend to take on more work that necessary. One of our respondents said, while referring to her leader, “I would just like to know more of what some of her needs and challenges are. I think she takes a lot on her shoulders that, at times, we could probably assist with.”

Second is the idea that implicit in the data from research question one is the concept that giving autonomy can be highly motivational for many people. The data indicated that excess autonomy may be perceived as a negative for some virtual team members. One leader said that, “there were a couple of comments, or, or areas that looked like they weren’t getting ... enough of my time.” Another said of his leaders, “I would say probably, if anything, she may, she may be too autonomous. What I mean by that is we don’t often get feedback from her.” While autonomy may be highly motivational, it appears to have its dark side in virtual teams.

Research question two asked, *What helping and hindering forces to effective leadership exist in virtual teams and what is currently being done or can be done in the future to enhance strengths and overcome barriers?* Team and organizational helpful forces emerged from the data. Under the broad category of *motivation*, we identified properties of fit with personal style, satisfaction with work/life balance, and alignment of personal and organizational goals. The first helpful team force that many people gain satisfaction from working on a virtual team

since it meets certain personal needs for work/life balance. As one of the respondents phrased it, “I’m an introvert, so that works for me.” Another said that they had a company-wide job satisfaction initiative ongoing and that “part of that initiative is work/life balance, which for me is what working from home is all about.” Although many team members acknowledged that working virtually had its challenges, the flexibility and /or autonomy more than made up for it.

At the organizational level, was the idea that successful virtual teams exist in a culturally-sensitive environment. In all three cases, respondents noted that their organizations had developed the capacity to appreciate cultural differences regardless of the manner in which these characteristics appeared. One of our respondents put it best when she said, “in a virtual team, what we need to be aware of more so is time zones, cultural differences, perspectival [sic] and perceptual differences, linguistic differences that can lead to misunderstandings.” Although conflicts arose as a result of cultural differences, participants alluded to a *learning culture* that superseded a particular organizational culture.

At the team level, we derived the category of *face validity*, which encompassed the properties of face-to-face contact, accountability, and dependability. One of our respondents said that virtual team members need to understand that team performance “is going to happen differently than it would face-to-face.” Another leader reported that she would “do a little more face-to-face than we currently do” to improve the teams performance. One of our respondents summarized the things that are being done in his team in this regard by stating that “those connections probably helped because we’ve already had some face-to-face [contact].” Second is accountability. One of our respondents indicated that team members who “did not follow through with what they were supposed to do” were an issue in her team. Another gave an illustration when she said that, “one person who lives abroad was trying to establish his own consultancy practice, and so things were very unpredictable in his own schedule and that was reflected in his ability to respond to the needs of this team.”

Organizational *readiness* emerged as the single most important category containing a host of potentially hindering forces to the successful implementation of virtual teams. Although highly interconnected to the team level hindering forces, this category holds properties that were much more difficult to specify. Respondents were vague when asked for examples but they were certain that there were some larger forces at play occasionally that made them aware of their vulnerability as virtual team members. As one of our respondents said, “many folks out there are not ready to accept this whole concept” of virtual teams. One of our leaders reported that she has responded to this challenge by implementing a training intervention for virtual teams leaders and members. “We have developed and are just releasing remote management; a remote management course for managers, and a remote management course for people who are being remotely managed because there’s pain, you know, out there.”

Visioning Leadership Development

In reviewing the categories and properties that emerged from the data, we were hard pressed to find content that would not be part of conventional leadership development programs with the exception of enhanced technical skills. However, the virtual team leaders who participated in this study noted that this particular leadership role does not lend itself well to a *program*. Formal instruction (conducted face-to-face) simply does not convey the nuances of the virtual context. These leaders envisioned successful virtual team leadership development on a continuum that begins with becoming a successful leader first in-house by establishing credibility in the face-to-face context and gaining access to sources of power. Second, they asserted that an important developmental requirement was to be a member or a virtual team prior to leading one. Finally, they noted that they saw themselves as change agents for the organization as a whole, constantly advocating for their in-house leader colleagues to understand the subtleties of remote management/leadership because it is so very easy to lapse into a “out of sight, out of mind” frame. One of our respondents summarized the leadership development implications by stating,

The virtual team leader needs to be expert, I think, at written communication and electronic communication. You can have this skill, but you have to be willing to be connected to the computer, so that you can be available to respond in a timely way when other people around the globe are accessible and available. So communication and interpersonal relationships and diplomacy are key. And then of course, all of that leads to keeping people thinking and believing and feeling as if they truly are connected and integral to the overall team project and to the organization.

Conclusions, Recommendations, and Contribution to HRD

This research began with the central research question was: what specific leadership behaviors, competencies, skills, and attributes contribute to virtual team effectiveness? In answer to that question, much important information has emerged from this research project. First, as Colky et al. (2002) uncovered, communication is critical in leading virtual teams. However, this multi-site case study further illuminated communication as having two narrower

categories, responsiveness and empowerment. The second factor, identified by Colky et al. was trust. While we acknowledge that our participants operationalized this in some respects (accountability and dependability), our participants operated out of an overall motivational frame noting that their desire to be members or leaders of virtual teams fit their personal life style and needs for work/life balance. It was within that context that they sought to be accountable and dependable. Collaborative learning was the third construct named in Colky et al., and it is tempting to align our finding of a *learning culture* with it. But, where the learning is taking place and needs to take place pose some challenges. Clearly, these participants were aware of both strengths and weaknesses in the capacity of their host organizations' culture to learn from and support virtual teams. Collaborative learning within the team came up only as a function of the members' interdependence, which varied across the three cases.

Second, several factors emerged, that are not different from face-to-face team leadership. These include anticipating team needs, clarifying needs, setting performance expectations, mentoring and coaching, and providing feedback. These factors appear to support Chase's (1999) contention that virtual teams are just like face-to-face teams, 'only more so' (p. 76).

Finally, this research uncovered some important implications for HRD. First, HRD practitioners may now understand more specifically the meaning of effective leadership in virtual teams. For example, this research uncovered that communication in virtual teams means, among other things, being personally responsive and empowering followers. This alone has widespread implications for hiring and recruiting practices in organizations considering virtual teams.

Second, the major implication of this research to HRD theoreticians is that we now may be able to construct leadership development processes that will be meaningful to our client organization. We are just beginning to understand the notion of leadership in virtual teams.

While this research has important implication to the HRD community, it is just the starting point. In order to be fruitful, much is yet to be done to bore more deeply into this elusive topic.

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