



Cornell University
ILR School
Center for Advanced Human Resource Studies

Global Teams: Trends, Challenges and Solutions

A Collection of White Papers:

- **A Cost-Benefit Analysis of Face-to-Face and Virtual Communication: Overcoming the Challenges**
- **Building Teams from a Distance**
- **Virtual Leadership: Required Competencies for Effective Leaders**
- **Developing Global Mindset and the Impact on Virtual Teams**
- **Challenges and Interventions in Monitoring and Evaluating Virtual Team Performance**
- **Virtual Teams: Work/Life Challenges- *Keeping Remote Employees Engaged***

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By: Rebecca Heller, Aaron Laurito, Kurt Johnson, Maureen Martin, Rex Fitzpatrick and Kirsten Sundin

2010 CAHRS Graduate Research Assistants

Under the supervision of Pamela Stepp, Ph.D. and Bradford Bell, Ph.D

Introduction

In recent years, companies have increasingly turned to virtual teams as a means of connecting and engaging geographically dispersed workers, lowering the costs associated with global collaboration, and enabling greater speed and adaptability. These teams have shifted the way in which organizations traditionally form, manage and evaluate team performance. Virtual teams, although offering many benefits, also pose a number of challenges. Developing effective global leaders, keeping remote employees engaged, forming and developing global teams, monitoring and evaluating distance employees, and developing a global mindset are all areas that companies are working to better understand.

In response to these and other challenges, we have spent the last semester researching and writing about topics of interest to companies either currently utilizing global virtual teams or considering adoption of virtual teams. These topics include virtual team leadership, a cost-benefit analysis of virtual communication and face-to-face communication, work life challenges, building teams from a distance, monitoring and evaluating distance employees, and developing a global mindset in regard to global virtual teams. Each paper includes an annotated bibliography, which lists descriptions of additional resources regarding that paper's topic.

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Rebecca Heller

Aaron Laurito

Kurt Johnson

Maureen Martin

Rex Fitzpatrick

Kirsten Sundin

Table of Contents

EXECUTIVE SUMMARY: PAPER ABSTRACTS.....	7
A COST-BENEFIT ANALYSIS OF FACE-TO-FACE AND VIRTUAL COMMUNICATION: OVERCOMING THE CHALLENGES.....	9
Annotated Bibliography.....	21
BUILDING TEAMS FROM A DISTANCE.....	29
Annotated Bibliography.....	35
VIRTUAL LEADERSHIP: REQUIRED COMPETENCIES FOR EFFECTIVE LEADERS.....	39
Annotated Bibliography.....	48
DEVELOPING GLOBAL MINDSET AND THE IMPACT ON VIRTUAL TEAMS.....	53
Annotated Bibliography.....	63
CHALLENGES AND INTERVENTIONS IN MONITORING AND EVALUATING VIRTUAL TEAM PERFORMANCE.....	69
Annotated Bibliography.....	76
VIRTUAL TEAMS: WORK/LIFE CHALLENGES - <i>KEEPING REMOTE EMPLOYEES ENGAGED</i>	81
Annotated Bibliography.....	89
ABOUT THE CENTER FOR ADVANCED HUMAN RESOURCE STUDIES (CAHRS).....	99
ABOUT THE AUTHORS.....	99

EXECUTIVE SUMMARY: PAPER ABSTRACTS

A Cost-Benefit Analysis of Face-to-Face and Virtual Communication: Overcoming the Challenges

Evolving technologies allow organizations to become increasingly global. This trend has led organizations to adopt virtual communication to face global challenges. As increasing numbers of organizations implement various virtual communication tools, face-to-face contact has shifted to virtual communication, bringing forth new opportunities and threats. This paper explores the debate between face-to-face and virtual communication and identifies the costs and benefits associated with each, in addition to identifying strategies for effectively utilizing virtual communication.

Building Teams from a Distance

Virtual teams are emerging with increased frequency in organizations around the globe. Successful virtual team building is challenging because teams are frequently composed for short periods of time and are created to tackle specific tasks. Establishing an effective virtual team requires exemplary leadership, easy access to technology and team training, as well as rules to protect team members that address differences in time zones, cultures and languages. Creating and maintaining trust, along with open lines of communication among team members has also been shown to be vital for virtual team success. While forming effective virtual teams is difficult, with effort and awareness of all parties involved, it can be achieved.

Virtual Leadership: Required Competencies for Effective Leaders

With the advent of the internet and the host of communication tools that have followed, teams today are becoming increasingly dispersed and diverse. Studies are now being conducted to understand how leadership has or should evolve in order to meet the changing needs and demands of these new and different communities. This paper explores leadership in virtual settings and how it's changing as more teams move away from traditional team environments. Specifically, it looks at virtual leadership roles, responsibilities, and competencies, identifies challenges unique to virtual teams, and considers important global implications for effective leadership.

Developing Global Mindset and the Impact on Virtual Teams

Greater use of virtual teams is just one way companies are responding to increasingly global demands. Considering the rise of virtual teams, developing a global mindset among managers is essential to overcoming challenges associated with working across languages and cultures. This paper explores the role of a global mindset in overcoming these challenges in the context of remote, virtual work. To this end, the challenges of global managers working in virtual teams are outlined, the concept of a global mindset is defined, and comparisons are made between the characteristics of locally-minded and globally-minded managers. Next, conditions for global virtual team effectiveness are presented and the essential competencies for managers of global virtual teams identified. Finally, strategies for developing a global mindset in leaders and employees are discussed.

Challenges and Interventions in Monitoring and Evaluating Virtual Team Performance

Research suggests that the implementation of virtual teams can provide organizations with many potential benefits—remote working options to greater attract and retain employees, enhanced project decision quality stemming from the firm’s ability to place the best individuals together on a team regardless of geographical location, closer contact to customers worldwide, along with a host of others. However, the benefits afforded by virtual teams are also coupled with many challenges—such as effectively monitoring and evaluating virtual team performance. This paper aims to provide insight into what current research has identified as the major roadblocks in monitoring and evaluating virtual team performance, along with research-derived recommendations regarding how to improve upon these challenges.

Virtual Teams: Work/Life Challenges- *Keeping Remote Employees Engaged*

Remotely located employees are quickly becoming a norm in the modern workplace in response to evidence that telecommuters save on costs and produce more efficiently. There are many intangible benefits also felt with the increasing prevalence of remote employees. Telecommuters are more satisfied with their work/life balance and report lower rates of job burnout. Though there are also many well-identified setbacks remotely located managers and employees may face. Employers see the most success with telecommuting by first recruiting the people best fit to fill these remote roles. However, the process of developing remote employees is a process that requires constant monitoring. The purpose of this paper is to identify the best practices being used by companies to keep remote employees engaged while simultaneously avoiding burnout.

A COST-BENEFIT ANALYSIS OF FACE-TO-FACE AND VIRTUAL COMMUNICATION: OVERCOMING THE CHALLENGES

Rebecca Heller, Gap Inc. Graduate Research Assistant for CAHRS

Virtual communication has become the norm for many organizations (Baltes, Dickson, Sherman, Bauer, & LaGanke, 2002; Bergiel, Bergiel, & Balsmeier, 2008; Hertel, Geister, & Konradt, 2005). As technology has evolved, time and distance barriers have dissolved, allowing for access to experts worldwide. The reality of business today demands the use of virtual communication for at least some work, and many professionals will sit on a virtual team at some point (Dewar, 2006). Although virtual communication offers many advantages, it is not without challenges. This article examines the costs and benefits associated with virtual and face-to-face communication, and identifies strategies to overcome virtual communication's challenges.

Advantages of Face-to-Face Communication

Face-to-face communication has a number of significant advantages, and many observers argue that there is no replacement for face-to-face contact, regardless of how far technology has evolved (Duke, 2001; Oxford Economics, 2009). For example, face-to-face contact facilitates the transfer of tacit knowledge (Bower, Hinks, Wright, Hardcastle, & Cuckow, 2001), or knowledge that is not written or definable, but gained through experience (Griffith, Sawyer, & Neale, 2003). When communicating face-to-face, the speaker can draw on visual cues from the audience to gain quick, immediate feedback and make rapid adjustments as necessary (Storper & Venables, 2004). Visual cues and social presence in face-to-face dialogue also enable members to more easily learn about one another's background, skills, experiences, and areas of expertise (Rosen, Furst, & Blackburn, 2007). These cues build trust within groups that interact face-to-face (Storper & Venables, 2004). Although organizing and planning for face-to-face contact can be difficult and costly, this in itself can send a message of value to the recipients (Storper & Venables, 2004).

Disadvantages of Face-to-Face Communication

Although face-to-face communication has long been the trusted mode of contact, it also has a number of disadvantages. Research suggests that minority expression is lower in face-to-face groups, inhibiting trust in heterogeneous groups and creating unequal participation among members (Krebs, Hobman, & Bordia, 2006; Lind, 1999; McLeod, Baron, Weighner Marti, & Kuh Yoon, 1997). Additionally, facilitating face-to-face contact between co-workers or with clients is often unrealistic for certain organizations, as business travel is too costly (Rosen et al., 2007, Storper & Venables, 2004). [See Table 1].

Advantages of Computer-Mediated Communication

Recent developments in technology have enabled a new medium for communication, known as computer-mediated-communication (CMC), or virtual communication. Specifically, CMC refers to "...any form of exchange that requires the use of a computer..." (Dietz-Uhler & Clark, 2001). CMC

has many advantages for organizations given increased globalization and the need for rapid knowledge transfer across borders and time zones. Additionally, CMC addresses many of the disadvantages of face-to-face communication, such as cost and minority expression. CMC has saved major transnational organizations up to \$50 million (Bergiel et al., 2008), proving it to be a cost-effective way of conducting business (Baltes et al., 2002; Cascio, 2000; Hill, 2000).

In addition to cost savings, CMC eliminates the non-verbal cues and power differences (Bower et al., 2001) that inhibit equal participation, resulting in more equal levels of participation within heterogeneous groups (Dietz-Uhler & Clark, 2001; Hertel et al., 2005; Lind, 1999). Dietz-Uhler and Clark (2001) found that when groups engaged in CMC followed by a face-to-face discussion, they perceived their interactions as more enjoyable than groups who did not engage in CMC prior to a face-to-face discussion. Dietz-Uhler and Clark (2001) argue that this difference was attributable to the fact that CMC enables greater freedom of thought, in turn improving the dialogue. Moreover, Lind (1999) and Nowak (2003) found that women reported feeling more social presence and were more satisfied in a CMC environment than men.

Also, CMC can create equal opportunities in the workplace. Physically disadvantaged employees have greater access to the virtual environment than the physical workspace, creating teams that are more diverse in makeup and fostering greater creativity and innovation. Moreover, as performance in a virtual team is evaluated solely on productivity (given that physical appearance remains anonymous), age and race discrimination are greatly reduced in a virtual setting (Bergiel et al., 2008). However, as technologies offer greater information richness, these differences may begin to reappear.

In addition to cost and minority expression, CMC has a number of other advantages. CMC addresses time constraints (Cascio, 2000), as asynchronous technologies (with a delay between sender and recipient, such as email) allow users to communicate at any time and location with access to the technology (Dietz-Uhler & Clark, 2001; Rosen et al., 2007). Additionally, CMC provides organizations with access to experts that would otherwise only be accessible at very high travel costs (Cascio, 2000; Rosen et al., 2007). Moreover, CMC holds promising implications for recruitment. With CMC, organizations can recruit talented individuals who may not be willing to relocate for a job but are willing to work virtually (Bergiel et al., 2008; Cascio, 2000). Generally speaking, Dietz-Uhler and Clark (2001) argue that CMC is a practical alternative to face-to-face communication, as participants report it to be enjoyable, effortful and valuable.

Disadvantages of Computer-Mediated Communication

Although CMC provides myriad benefits to organizations in terms of cost, diversity, recruitment, and access to expertise, it also has a number of disadvantages- both logistical and deep-rooted. CMC poses countless technical and logistical problems, which often are very time-consuming, such as scheduling, coping with time delays and encountering software problems (Bergiel et al., 2008; Bower et al., 2001; Powell, Piccoli, & Ives, 2004). Specifically, synchronous CMC (modes of technology that occur in real-time, such as video-conferencing or instant messaging) can be difficult to schedule due to time zone barriers (Bergiel et al., 2008). Training and technological expertise issues also arise in a virtual environment, (Bergiel et al., 2008; Powell et al., 2004) as team members frequently lack the training necessary to function effectively and navigate the technology in a virtual environment (Bergiel et al., 2008). This results in what is referred to as a generational gap between those comfortable with technology (the under 30's) and those less comfortable (Bergiel et al., 2008).

CMC also generates many interpersonal challenges. The absence of non-verbal cues and tacit knowledge transfer makes communication difficult (Bower et al., 2001; Lantz, 2001; Hill, 2000; Powell et al., 2004). These deficiencies eliminate social presence and hinder relationship formation, cohesion and trust, all of which are imperative to a virtual team's success (Cascio, 2000; Powell et al., 2004). Specifically, this lack of social presence creates an environment in which members easily misinterpret facts or make incorrect assumptions. Virtual team members often incorrectly assume others' intentions when they do not respond to emails or misinterpret the meaning and emotion of written language (Bergiel et al., 2008; Dewar, 2006). Furthermore, these interpersonal struggles can induce conflict, which is harder to discover and manage in a virtual team, and negatively impacts productivity (Bergiel et al., 2008; Hertel et al., 2005; Rosen et al., 2007). Specifically, Stark and Bierly (2009) found a positive correlation between highly virtual groups and interpersonal conflict, such that groups with high levels of virtuality also exhibited higher levels of interpersonal conflict.

Additionally, CMC poses coordination challenges. It can be difficult to establish a vision and mission in a virtual team due to the flexibility of time, space and the lack of visual cues (Dewar, 2006). Due to cultural and language differences, knowledge sharing can also be difficult in a virtual team (Bergiel et al., 2008; Powell et al., 2004). Powell et al. (2004) found that culturally diverse virtual teams experienced coordination and communication issues. Moreover, a lack of proper databases and people trained to maneuver knowledge can result in "information overload" (Rosen et al., 2007). When coordinating with external or intra-organizational constituencies, the speed and ease of virtual communication can send a message of unimportance to the recipient (Storper & Venables, 2004). When communicating virtually, recipients may deduce that they are not significant enough to warrant the expense of face-to-face time. In general, Baltes et al. (2002) argue that CMC groups are rarely more effective, take less time and are less satisfied than face-to-face groups. [See Table 2].

Strategies for Making CMC More Effective

Interpersonal Measures

Although CMC faces challenges, organizations continue to rapidly adopt virtual communication systems. It is imperative that organizations recognize these challenges and learn to use CMC effectively. Interpersonal dimensions, such as enhancing communication and increasing social presence are two areas that impact virtual team effectiveness (Cascio, 2000; Dewar, 2006; Guo, D'Ambra, Turner, & Zhang, 2009; Hill, 2000; Lin, Standing, & Liu, 2008; Ji, Hollenbeck, & Zinkhan, 2008; Powell et al., 2004; Storper & Venables, 2004). In fact, Lin et al. (2008) found that social factors were the most significant predictors of virtual team performance and satisfaction (see Table 5). Recommendations for enhancing communication include setting ground rules regarding communication frequency, effective qualities of communication, extent of feedback, and knowledge access. According to Dewar (2006), predictable and timely responses between members lead to greater levels of trust in a virtual team. Cascio (2000) also suggests setting times for regular meetings as well as individual accessibility by phone or email, but to avoid relying on email as the sole means of communication. Members should also rely on a common database to store and share knowledge (Hertel et al., 2005; Powell et al., 2004). In terms of defining effective communication, Guo et al. (2009) found when virtual teams engaged in the dialogue technique, a strategy for developing a shared mental model of effective communication [see Table 4], they reported greater cohesion, communication satisfaction and team decision-process satisfaction than virtual teams who did not use the dialogue technique. Furthermore, virtual teams who used the dialogue technique did not differ from face-to-face teams who did not use the dialogue technique. These results suggest that virtual teams who use the dialogue technique may perform to the level of face-to-face teams (Guo et al., 2009).

Another strategy for improving virtual communication is to increase social presence by allowing members to meet face-to-face (Cascio, 2000; Hertel et al., 2005; Hill, 2000; Lin et al., 2008; Powell et al., 2004; Storper & Venables, 2004). Social presence cues, or another person's presence in a communicative situation, have shown to increase trust, help members form better relationships with one another, and increase perceptions of reciprocity, quality, loyalty and favorability in a CMC environment (Ji et al., 2008; Hertel et al., 2005; Lin et al., 2008; Powell et al., 2004). Powell et al. (2004) found that virtual teams who held early face-to-face meetings formed better interpersonal relationships, trust, respect, socialization and an improved understanding of the project. As much of the work done in a virtual team is task-focused, research suggests these face-to-face meetings should focus on relationship building, setting ground rules for effective teamwork, resolving conflict and technology use (Hertel et al., 2005; Lantz, 2001; Powell et al., 2005).

Strategic Measures

In addition to enhancing interpersonal communication, strategic measures and actions can be taken to make virtual teams more effective. These measures include improving understanding, coordination and training among members. Specifically, virtual team leaders should place a high emphasis on establishing a clear vision for the team. For instance, encouraging members to share their personal gains from the team will create a vision that speaks to all members (Dewar, 2006).

Additionally, Powell et al. (2004) found that virtual teams who established shared norms for behavior, set goals and agendas and developed a clear structure for meetings had greater success. Dewar (2006) recommends that virtual team members should strive to “take a systems view” in understanding how their role coordinates with the rest of the organization. By providing virtual teams with broader resources and information (such as organizational charts, other teams on their level and stakeholders involved in the project), members can adopt a better understanding of their team’s role in the organization (Hertel et al., 2005; Dewar, 2006).

In terms of training, organizations must be cognizant of the generational differences that exist regarding comfort with technology (Bergiel et al., 2008). Virtual teams members should be trained to use the required software, manage an anonymous environment, provide anonymous participation and feedback, follow social protocol and respect cultural differences (Cascio, 2000; Hertel et al., 2005; Powell et al., 2004). Powell et al. (2004) and Hertel et al. (2005) found that virtual team members who had received training in these areas functioned more effectively than virtual teams without training.

Task-Technology Fit

Another strategy that organizations can adopt for more effective use of virtual communication is recognition that the mode of communication often depends on the nature of the task being performed. In other words, face-to-face and virtual communication are more effective for certain tasks than others. Face-to-face communication is a more appropriate measure for ambiguous or unstructured tasks, such as setting strategy, making difficult decisions, resolving conflicts, or negotiating with another party (Baltes et al., 2002; Hertel et al., 2005; Lin et al., 2008; Powell et al., 2004). Baltes et al. (2002) found that face-to-face groups who performed intellectual or decision-making tasks were more satisfied with the outcomes than CMC groups who performed the same tasks. Furthermore, face-to-face communication is more appropriate when working with external clients or customers (Powell et al., 2004). Although some virtual communication may enhance the interaction (such as email), research suggests there is significant profitability in maintaining face-to-face contact with external clients, and is no substitute for the value that face-to-face communication brings (Duke, 2001; Oxford Economics, 2009).

However, there are tasks in which virtual communication may be more effective. Specifically, structured, non-immediate or passive tasks may be more appropriate to conduct virtually (Dewar, 2006; Hertel et al., 2005; Lin et al., 2008; Powell et al., 2004). For instance, Hertel et al. (2005) found that brainstorming electronically can yield higher quality results than if conducted face-to-face. In instances when virtual communication is the chosen mode for all tasks, it is important to utilize the best form of CMC depending on the task (Powell et al., 2004). For instance, synchronous communication, (i.e. audio or video-conferencing) should be utilized when engaging in knowledge-sharing or relational tasks, such as brainstorming, decision-making, or handling interpersonal conflicts (Dewar, 2006; Powell et al., 2004; Rosen et al., 2007). Synchronous devices with limited social presence (i.e. chat rooms) should be utilized for more informal sharing, such as small talk or social conversations (Rosen et al., 2007). Research suggests it is best to utilize asynchronous communication (i.e. email) for passive information seeking, structured tasks, or matters that do not

require an immediate response, such as routine analyses or monitoring the status of a project (Dewar, 2006; Lin et al., 2008; Powell et al., 2004).

Individual disposition should also be taken into account when determining the appropriateness of virtual communication. Certain individuals who rely on human interaction to stay energized and on-task, or require external structures (such as an office space or meeting room) to produce quality work (Bergiel et al., 2008) may not be psychologically suited to work in a virtual team [See Table 3].

Conclusion

As technology evolves and borders dissolve, virtual communication has become the norm for many organizations. The debate over whether virtual communication is a viable alternative to face-to-face communication is ongoing. According to the literature, if used effectively and appropriately, virtual communication shows a promising avenue for organizations to pursue. When utilizing virtual communication, special attention must be paid to the mechanisms and members involved, to ensure maximum benefit to the organization. Regardless of the debate, organizations must recognize that virtual communication is sustainable, and with the right tools, technology, people and processes, organizations can utilize virtual technologies to achieve high quality and satisfying results.

Table 1:

Advantages and Disadvantages of Face-to-Face Communication

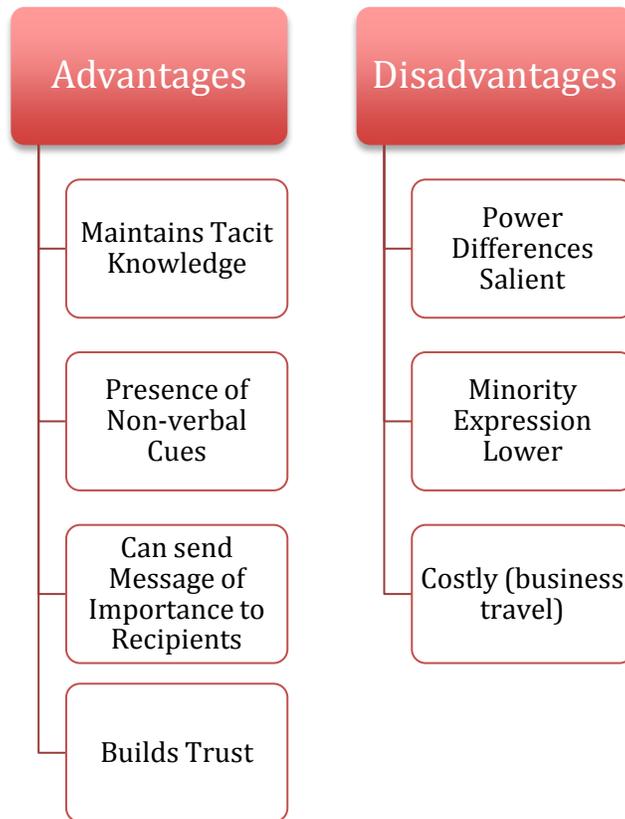


Table 2:
Advantages and Disadvantages of Virtual Communication



**Table 3:
Strategies for Making CMC More Effective**

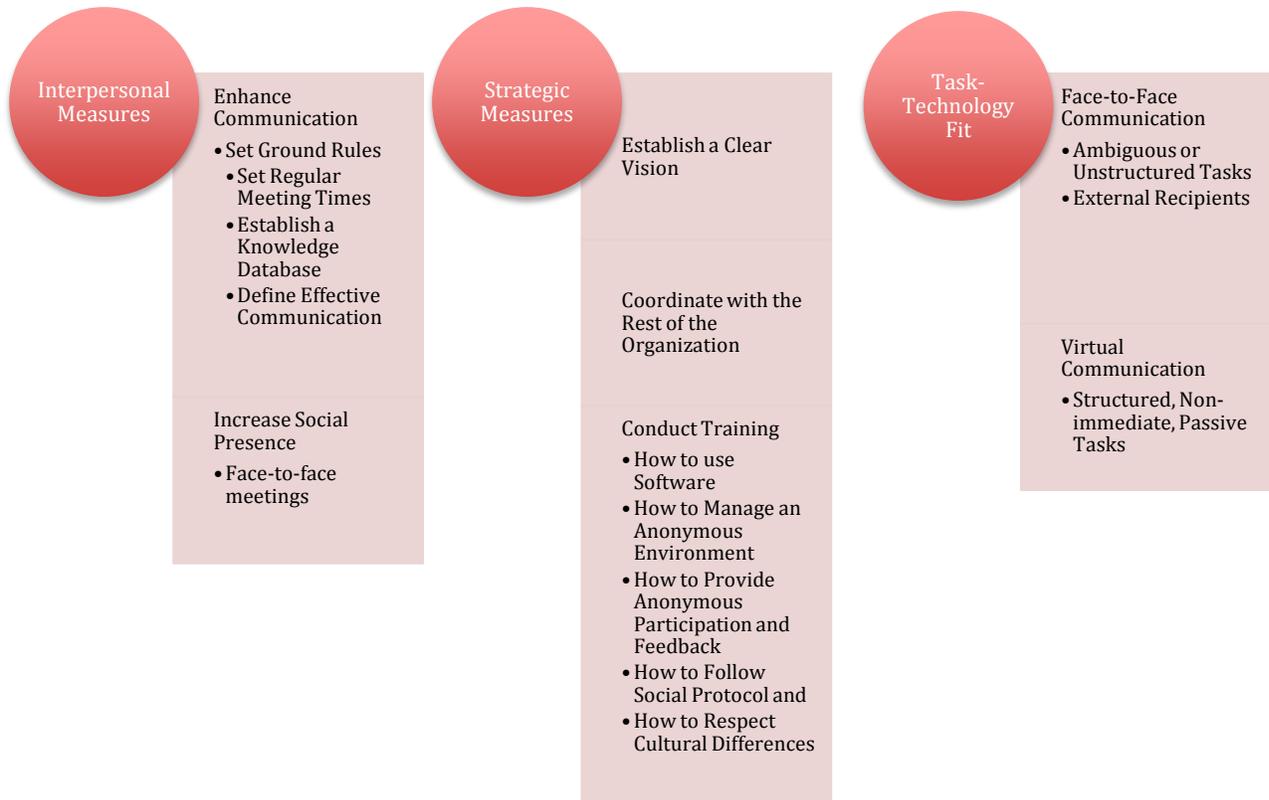
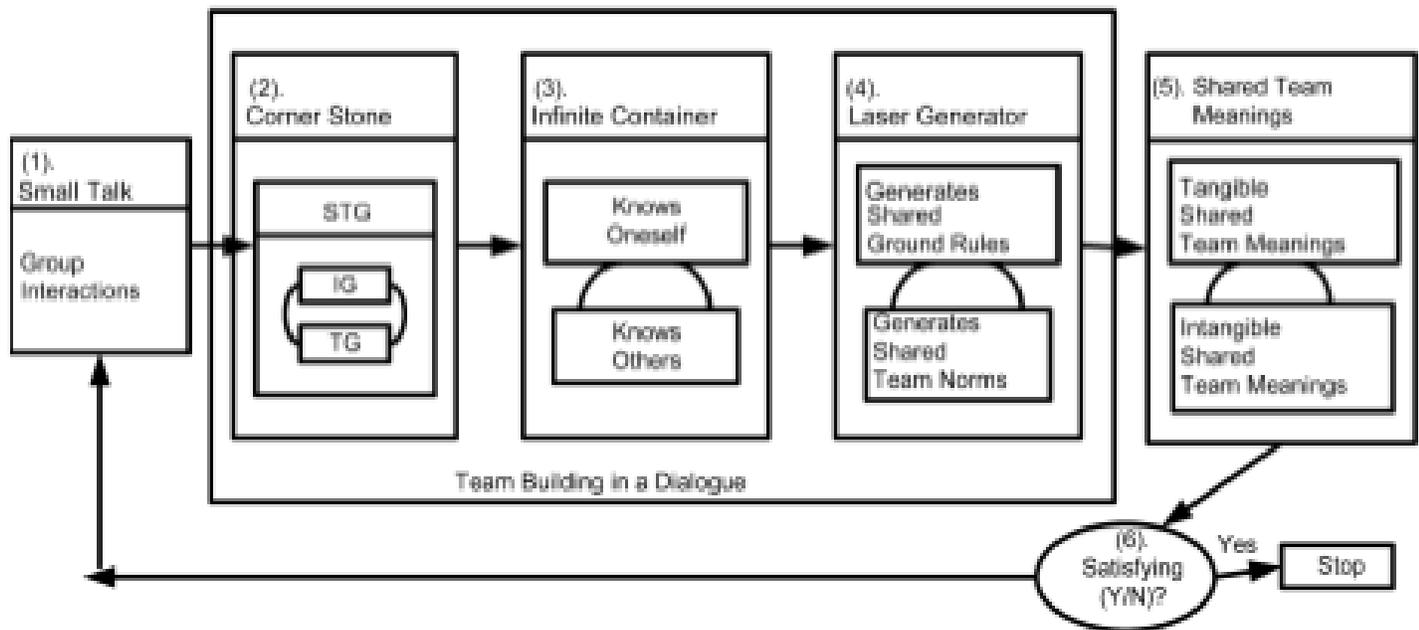
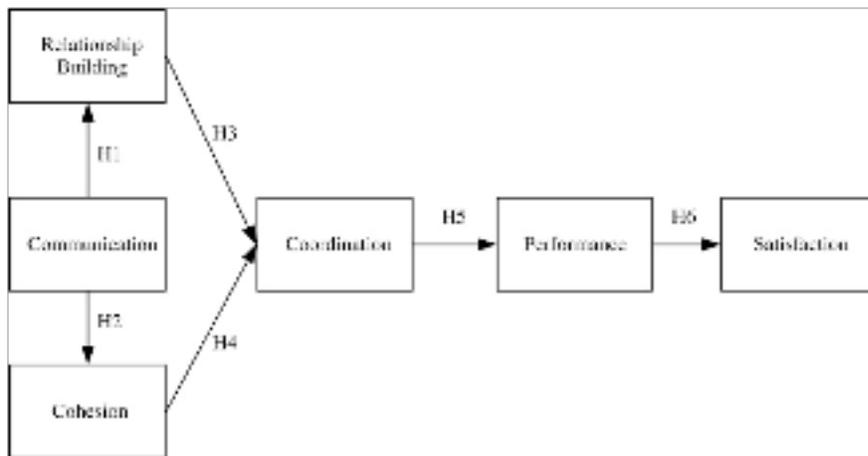


Table 4:
Dialogue Technique



Source: Guo et al. (2009) adapted from Huang et al. (1998)

Table 5:
An Integrated Model of Virtual Team Effectiveness



Source: Lin et al. (2008)

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Abstract: A meta-analysis of research comparing decision making in face-to-face versus computer-mediated communication groups was conducted. Results suggest that computer-mediated communication leads to decreases in group effectiveness, increases in time required to complete tasks, and decreases in member satisfaction compared to face-to-face groups. All of the moderators tested (anonymity in the group process, limited versus unlimited time to reach decisions, group size, and task type) were significant for at least one of the dependent variables. The article concludes with cautions about the unbridled rush by organizations to adopt computer-mediated communication as a medium for group decision making and implications of the present findings for theory and research on computer-mediated communication and group decision making.

Bergiel, B. J., Bergiel, E. B., & Balsmeier, P. W. (2008). Nature of virtual teams: A summary of their advantages and disadvantages. *Management Research News*, 31(2), 99-110.

Abstract: Purpose – This paper aims to extend knowledge about virtual teams and their advantages and disadvantages in a global business environment. Design/methodology/approach – Based on a literature review and reported findings from interviews with experts and practitioners in the field, the paper has identified and discussed the advantages and problems associated with creating and managing virtual teams. Findings – In today's competitive global economy, organizations capable of rapidly creating virtual teams of talented people can respond quickly to changing business environments. Capabilities of this type offer organizations a form of competitive advantage. Originality/value – By identifying the advantages and problems associated with virtual teams, organizations will be better able to successfully establish and manage such teams.

Bower, D. J., Hinks, J., Wright, H., Hardcastle, C., & Cuckow, H. (2001). ICTs, videoconferencing and the construction industry: Opportunity or threat? *Construction Innovation*, 1(2), 129-144.

Abstract: The paper discusses the potential impact of videoconferencing on practices and processes within the construction industry, based on analyses carried out on its use and impact in the healthcare sector – which like construction involves technology-intensive processes which are dependent upon cross-professional and cross-disciplinary relationships and communications, operate within an increasingly regulatory and litigious climate, and involve organizationally fluid, virtual, teams spanning several sub-industries. Recently published research evidence from the healthcare sector suggests that whilst videoconferencing and other advanced information and communication technologies (ICTs) have pervasive capabilities, successes in their application may be short lived and modest in achievement. In use, their actual uptake and application have been

found to be fundamentally affected by a range of social and operational issues, such as fears over a new formalization and trackability of previously informal conversations; a rebalancing of power relationships (between professionals using the ICTs as well as between doctor and patient); pressures on social/ cultural and procedural alignment between participants; and personal and corporate attitudes to the technologies (including simply disliking the ICT). There is also evidence from the healthcare sector to suggest that ICTs increase the complexity of the delivering healthcare, and that the limitations of the technologies emphasize an existing dependency of communications and processes on tacit knowledge which is not readily formalized for communication via ICTs. However, the paper also notes an increasing pressure on the construction industry to respond to the globalizing potential that ICTs offer for the supply and delivery of knowledge-based services, and discusses the implications of the issues found in the health-care sector for the use and potential abuse of ICTs in the construction industry that will have to be successfully addressed in order to avoid ICTs being perceived as threatening and to allow their use to help organizations address the globalizing marketplace.

Cascio, W. F. (2000). Managing a virtual workplace. *Academy of Management Executive*, 14(3), 81-90.

Abstract: Virtual workplaces, in which employees operate remotely from each other and from managers, are a reality, and will become even more common in the future. There are sound business reasons for establishing virtual workplaces, but their advantages may be offset by such factors as setup and maintenance costs, loss of cost efficiencies, cultural clashes, isolation, and lack of trust. Virtual teams and telework are examples of such arrangements, but they are not appropriate for all jobs, all employees, or all managers. To be most effective in these environments, managers need to do two things well: Shift from a focus on time to a focus on results; and recognize that virtual workplaces, instead of needing fewer managers, require better supervisory skills among existing managers. Taking these steps can lead to stunning improvements in productivity, profits, and customer service.

Dewar, T. (2006). Virtual teams—Virtually impossible? *Performance Improvement*, 45(5), 22-25.

Abstract: Discusses challenges of working in virtual teams and methods that can be utilized to overcome them. Utilizes VASE (vision, assumptions, systems, expecting white water) model for effective use of virtual teams.

Dietz-Uhler, B., & Bishop-Clark, C. (2001). The use of computer-mediated communication to enhance subsequent face-to-face discussions. *Computers in Human Behavior*, 17, 269-283.

Abstract: A study assessing the effects of synchronous and asynchronous computer-mediated communication on subsequent face-to-face discussions was conducted. Participants were asked to read a short article about internet censorship. Then they were randomly assigned to one of three

groups: a synchronous (internet chat) group, an asynchronous (internet discussion board) group and a control group. Both the internet chat group and the internet discussion board group engaged in an on-line dialog about the article they read. They then followed the on-line dialog with a face-to-face discussion. The control group had no on-line discussion but instead immediately began a face-to-face discussion. Finally, all completed a questionnaire about their experience. The results showed that face-to-face discussions preceded by either synchronous or asynchronous computer-mediated communication were perceived to be more enjoyable and include a greater diversity of perspectives than face-to-face discussions not preceded by computer-mediated communication.

Duke, S. (2001). E-mail: Essential in media relations, but no replacement for face-to-face communication. *Public Relations Quarterly*, 46(4), 19-22.

Abstract: Discusses the importance of electronic mail (e-mail) on media relations in the United States; Benefits and advantages of using e-mail; Comparison of e-mail with voice mail, fax and face-to-face communication; Use of e-mail in the practice of public relations.

Griffith, T. L., Sawyer, J. E., & Neale, M. A. (2003). Virtualness and knowledge in teams: Managing the love triangle of organizations, individuals, and information technology. *MIS Quarterly*, 27(2), 265-287.

Abstract: Information technology can facilitate the dissemination of knowledge across the organization— even to the point of making virtual teams a viable alternative to face-to-face work. However, unless managed, the combination of information technology and virtual work may serve to change the distribution of different types of knowledge across individuals, teams, and the organization. Implications include the possibility that information technology plays the role of a jealous mistress when it comes to the development and ownership of valuable knowledge in organizations; that is, information technology may destabilize the relationship between organizations and their employees when it comes to the transfer of knowledge. The paper advances theory and informs practice by illustrating the dynamics of knowledge development and transfer in more and less virtual teams.

Guo, Z., D'Ambra, J., Turner, T., & Zhang, H. (2009). Improving the effectiveness of virtual teams: A comparison of video-conferencing and face-to-face communication in china. *IEEE Transactions on Professional Communication*, 52(1), 1-16.

Abstract: As virtual teams become more and more important in organizations, understanding how to improve virtual team relational development and meeting outcomes is vital to project success. The objective of this study was to investigate how the dialogue technique that facilitated building of shared understanding in virtual teams can be used to enhance virtual team relational development and decision outcomes in a Chinese cultural context. The results from an experiment demonstrate that the adopted dialogue technique can indeed help team members develop their team relations and enhance their perceived team meeting outcomes. Video-conferencing virtual teams with shared mental models may be engaged as effectively as traditional face-to-face teams. Moreover, this study

reveals that the dialogue technique can enhance face-to-face team outcomes. Therefore, the findings of this study have both theoretical and practical implications for helping teams develop shared understanding of effective communication and enhance decision-making outcomes in the Chinese cultural context.

Hertel, G., Geister, S., & Konradt, O. (2005). Managing virtual teams: A review of current empirical research. *Human Resource Management Review*, 15, 69-95.

Abstract: This review summarizes empirical research on the management of virtual teams, i.e., distributed work teams whose members predominantly communicate and coordinate their work via electronic media (e-mail, telephone, video-conference, etc.). Instead of considering virtual teams as qualitatively distinct from conventional teams, the degree of virtuality of teams is understood as a dimensional attribute. This review is guided by a lifecycle model in which five phases are distinguished in the management of teams with high virtuality: Preparation, launch, performance management, team development, and disbanding. The main focus of the review is on quantitative research with existing virtual teams in organizational contexts. However, experimental research and case studies are considered when no field studies are available. The major research results are summarized for human resource management tasks within these phases, and recommendations for practitioners are derived.

Hill, J. (2000). Internet conferencing provides more cost-effective solution. *Presentations*, 14(1), 14.

Abstract: Focuses on the teleconferencing technology utilized by California firm Seagate Software Inc., for various product or marketing events. Driving factor behind the company's decision to venture into the Internet conferencing business; Advantages gained from using teleconferencing technology through the Internet; Industry observers' belief that Internet conferencing will never replace face-to-face communication.

Ji, H. S., Hollenbeck, C. R., & Zinkhan, G. M. (2008). The value of human warmth: Social presence cues and computer-mediated communications. *Advances in Consumer Research - North American Conference Proceedings*, 35, 793-794.

Abstract: Explores the salience of social presence cues in computer-mediated communications. Conducted 2x2 between subjects factorial to assess the effect of social presence cues. Found that social presence cues were positively correlated with customers' perceptions of reciprocity, site quality, consumer loyalty and favorability toward the site, in turn stressing the importance of social presence cues in computer-mediated-communications.

Krebs, S. A., Hobman, E. V., & Bordia, P. (2006). Virtual teams and group member dissimilarity. *Small Group Research*, 37(6), 721-741.

Abstract: The consequences of demographic dissimilarity for group trust in work teams was examined in a virtual (computer-mediated) and a face-to-face (FTF) environment. Demographic dissimilarity (based on age, gender, country of birth, enrolled degree) was predicted to be negatively associated with group trust in the FTF environment but not in the computer-mediated environment. Participants worked in small groups on a creative task for 3 consecutive days. In the computer-mediated environment, participants worked on the task for an hour per day. In the FTF environment, participants worked on the task for 20 minutes per day. Partial support was found for the effectiveness of computer-mediated groups in reducing the negative consequences of dissimilarity. Age dissimilarity was negatively related to trust in FTF groups but not in computer-mediated groups. Birthplace dissimilarity was positively related to trust in computer-mediated groups. Implications for the successful management of virtual teams are discussed.

Lantz, A. (2001). Meetings in a distributed group of experts: Comparing face-to-face, chat and collaborative virtual environments. *Behaviour & Information Technology*, 20(2), 111-117.

Abstract: This paper focuses on Collaborative Virtual Environments, and their potential to support work meetings for geographically distributed experts. The research question concerns the difference between face-to-face-, chat, and CVE meetings with regard to efficiency, communication process, problems with the technology, enjoyment and competence development. A small group of experts were observed during their natural work meetings. Six of the groups scheduled meetings were held three times in a chat environment and three times in a CVE. Results suggest s that chat and CVE meetings are experienced as more task oriented than face- to-face meetings, and t hat avatars support turn taking and are enjoyable.

Lin, C., Standing, C., & Liu, Y. (2008). A model to develop effective virtual teams. *Decision Support Systems*, 45(4), 1031-1045.

Abstract: A review of the literature shows the factors that impact on the effectiveness of virtual teams are still ambiguous. To address this problem we developed a research design that included a meta- analysis of the literature, a field experiment and survey. The meta-analysis identified factors which impact on the effectiveness of virtual teams which were then validated by a field experiment and survey. The results of the study indicate that social dimensional factors need to be considered early on in the virtual team creation process and are critical to the effectiveness of the team. Communication is a tool that directly influences the social dimensions of the team and in addition the performance of the team has a positive impact on satisfaction with the virtual team. A major contribution of the paper is an integrated model of factors that contribute to virtual team effectiveness.

Lind, M. R. (1999). The gender impact of temporary virtual work groups. *IEEE Transactions on Professional Communication*, 42(4), 276.

Abstract: Much knowledge work involves temporary work teams. Increasingly, these teams are not

face-to-face but virtual teams. This paper explores the gender impact of virtual collaboration as compared to face-to-face teams. Descriptive statistics are used to show the different perceptions of the group experience based on gender and on face-to-face versus virtual team experiences. Women in the virtual groups perceived that the group stuck together more and helped each other more than did the men. Also, the women were more satisfied with the virtual group than men and felt that group conflict was readily resolved. In comparing the experience of women in the virtual groups to women in the face-to-face groups, the face-to-face women were less satisfied with the group experience than their virtual counterparts and perceived that conflict was smoothed over.

McLeod, L. P., Baron, R. S., Weighner Marti, M., & Kuh Yoon, M. (1997). The eyes have it: Minority influence in face-to-face and computer-mediated group discussion. *Journal of Applied Psychology*, 82(5), 706-718.

Abstract: Results of an experiment comparing face-to-face groups with anonymous and identified computer-supported groups challenged theoretical arguments (V. S. Rao & S. L. Jarvenpaa, 1991) that computer-based group decision support systems (GDSS) can increase group decision quality by facilitating expression of minority opinions. In groups working on a hidden-profile investment decision task, minority opinion holders expressed their arguments most frequently under anonymous GDSS communication, but the influence of the minority arguments on private opinions and on group decisions was highest under face-to-face communication. These results suggest that the conditions that facilitate the expression of minority arguments may also diminish the influence of those arguments. The implications of these findings for a normative view of social influence, for social presence theory, and for the effects of GDSS on participation rates in group discussion are discussed.

Nowak, K. L. (2003). Sex categorization in computer mediated communication (CMC): Exploring the utopian promise. *Media Psychology*, 5(1), 83-103.

Abstract: Cue-lean media lack the physical information people traditionally rely on for social status attributions. It is possible the absence of this visible physical information reduces the influence of categorizations such as biological sex. If this were true, then cue-lean media may facilitate more egalitarian participation in interactions where all voices are equal (Hert, 1997; Lea & Spears, 1992; Rice & Love, 1987; Siegel, Dubrovsky, Kiesler, & McGuier, 1986). These predictions are part of what has been called the utopian promise of cue-lean media.

At the same time, these social status attributions are mentally salient, perceived to provide useful information, and frequently used in the person perception process (Bodenhausen & Macrae, 1998). It is possible that the mental salience of these categories sustains people's reliance on them whether the physical indicators are visible or not. These contrasting predictions were tested using a between-subjects experimental design. Forty-two undergraduates at a large midwestern university took part in this experiment. Participants engaged in the desert survival task across networked computers using text. Following the interactions, more than 1/3 of participants did not assign their partner to a sex category. The majority of those who made an attribution of their partner's biological sex were inaccurate. Those who did not assign their partner to a sex category felt more

immediacy and credibility as compared to those who did. Female participants reported the medium as being able to provide more social presence than did male participants. Implications for the utopian predictions in computer-mediated interactions are discussed.

Oxford Economics USA. (2009). *The return on investment of U.S. business travel*. Retrieved January 28, 2010, from http://www.ustravel.org/sites/default/files/09-10-09_Oxford%20Economics.pdf

Abstract: Business travel is under scrutiny. Corporations, responding to weakening profits, have targeted travel as an immediate candidate for cost savings. In addition, meetings and incentive travel have been recently maligned in public forums as excessive. Perhaps more than at any other time in recent history, business travel is being evaluated from all sides. To be useful, this evaluation should center on a fundamental business question: what is the relationship of business travel to company performance? Of course business travel generates significant economic value through its direct injections into the transport, hospitality, and other service sectors. This is not to be ignored. But the real value of business travel relates to its impact on individual company performance and, by extension, the performance of the U.S. economy. This study seeks to define exactly this. The approach is based on a combination of two separate surveys of corporate executives and business travelers, a review of related research, and an econometric analysis of the effects of business travel on corporate performance. The results of this collective analysis show a robust and irrefutable relationship between a company's investment in business travel—including internal meetings, trade shows, conferences, incentives, and sales—and its profitability.

Powell, A., Piccoli, G., & Ives, B. (2004). *Virtual teams: A review of current literature and directions for future research*. *Data Base*, 35(1), 6.

Abstract: Information technology is providing the infrastructure necessary to support the development of new organizational forms. Virtual teams represent one such organizational form, one that could revolutionize the workplace and provide organizations with unprecedented levels of flexibility and responsiveness. As the technological infrastructure necessary to support virtual teams is now readily available, further research on the range of issues surrounding virtual teams is required if we are to learn how to manage them effectively. While the findings of team research in the traditional environment may provide useful pointers, the idiosyncratic structural and contextual issues surrounding virtual teams call for specific research attention. This article provides a review of previously published work and reports on the findings from early virtual team research in an effort to take stock of the current state of the art. The review is organized around the input – process – output model and categorizes the literature into issues pertaining to inputs, socio-emotional processes, task processes, and outputs. Building on this review we critically evaluate virtual team research and develop research questions that can guide future inquiry in this fertile area of inquiry.

Rosen, B., Furst, S., & Blackburn, R. (2007). *Overcoming barriers to knowledge sharing in virtual teams*. *Organizational Dynamics*, 36(3), 259-273.

Abstract: In the fast-paced business environment of the 21st century, virtual teams can be a potential source of competitive advantage for many organizations. Virtual teams allow organizations to tap into the knowledge and expertise of employees regardless of their geographic location. However, the benefits of working virtually can only be realized if team leaders and team members are motivated to share their unique knowledge with each other. This might not always occur when team members have never met or worked together. In this article, we use extensive interview and survey data from virtual team members and leaders in multiple organizations to identify six barriers to knowledge sharing in virtual teams. We also examine the "best practices" effective teams employ to overcome these barriers and facilitate the exchange of important knowledge. The insights presented here should provide virtual team leaders with tools to maximize a virtual team's capacity to make better, faster, and more innovative decisions.

Stark, E. M., & Bierly, I., P. (2009). An analysis of predictors of team satisfaction in product development teams with differing levels of virtualness. *R&D Management*, 39(5), 461-472.

Abstract: The purpose of this study is to empirically examine and assess the moderating effects of extent of virtualness on a variety of well-established predictors of new product development team satisfaction. We focus our study on 178 different new product development teams from a variety of industries and use extent of virtualness as a structural characteristic of the teams, measuring it on a continuum. The predictors of team satisfaction we studied are relationship conflict, familiarity, goal clarity and preference for group work. Primary findings include: (1) relationship conflict has a more deleterious effect on team member satisfaction as teams become more virtual, mainly because it is very difficult for team members of virtual teams to resolve their interpersonal disputes; (2) the relationship between preference for group work and team satisfaction is moderated by extent of virtualness, such that preference for group work increases team satisfaction more as virtualness increases; (3) goal clarity and familiarity are not moderated by extent of virtualness, but have a significant direct effect on team satisfaction. Managerial and research implications of these findings relative to new product development teams are also discussed.

Storper, M., & Venables, A.J. (2004). Buzz: Face-to-face contact and the urban economy. *Journal of Economic Geography*, 4, 351-370.

Abstract: This paper argues that existing models of urban concentrations are incomplete unless grounded in the most fundamental aspect of proximity; face-to-face contact. Face-to-face contact has four main features: it is an efficient communication technology; it can help solve incentive problems; it can facilitate socialization and learning; and it provides psychological motivation. We discuss each of these features in turn, and develop formal economic models of two of them. Face-to-face is particularly important in environments where information is imperfect, rapidly changing, and not easily codified, key features of many creative activities.

BUILDING TEAMS FROM A DISTANCE

Aaron R. Laurito, Graduate Research Assistant for CAHRS

Virtual Team Advantages

Virtual teams are comprised of individuals that are separated geographically or organizationally and that rely primarily on technology to complete tasks (Powell, Piccoli & Ives, 2004). This work arrangement has been found to be advantageous for many firms because it reduces the costs and time associated with employee travel. It also permits organizations to attract and retain top talent because workplace flexibility is increasingly seen as a crucial aspect of job satisfaction for many employees (Bergiel, Bergiel & Balsmeier, 2008).

Virtual teams are also valuable to many businesses because team members commonly focus their interests on tasks instead of shared social or cultural environments, which often impact the dynamic within conventional teams (Hamilton & Scandura, 2003). This fosters a working environment that encourages innovation and decreases discrimination by hierarchy, employee impairments, race or age because productivity is more important than other characteristics (Bergiel et al., 2008). While virtual teams have many advantages, they frequently struggle to establish a strong sense of trust between individuals, frequent team member intercommunication, and effective leadership; all of which are necessary for team success.

Building Trust

Establishing trust is a crucial component of a cohesive virtual team. Trust is often difficult to achieve because many teams are assembled for a short period of time to complete specific tasks (Powell et al., 2004). Creating trust within a team is frequently done through face-to-face interactions among team members that take place early in the team's life span. These encounters have been found to be effective in allowing team members to socialize, build rapport with other individuals, and increase understanding of the team's purpose (Handy, 1999).

At Lincoln Financial, one virtual team manager related that when his team does have the opportunity for face-to-face interactions, they plan meals and activities together. The team's dinners and paintball outing created personal bonding opportunities that have improved trust within the team. The manager believes this is because the meals and activities have allowed the interactions between team members to become less formal and more personal. With stronger relationships within the team, the manager has been able to communicate more easily with team members because a personal connection and personal investment in each individual has already been established (Linkow, 2008).

In-person interactions are also important because they can contribute or accelerate the creation of “swift trust.” Many virtual teams experience this as a result of the perceived integrity of other individuals, reliable and continuous communication, and effective leadership early in the project lifecycle (Powell et al., 2004). If established, swift trust can significantly benefit the group so that virtual meetings have more robust participation of team members and subsequent virtual meetings are more task related and less social.

The level of trust between individuals in virtual teams can often be identified and enabled by the frequency and the length of emails sent between members (Jarvenpaa & Leidner, 1999). Virtual team members that communicate task related information most frequently and in shorter, more digestible emails have been shown to have stronger working relationships and experience higher levels of trust than employees that communicate less frequently and with more text. Virtual teams that experience high levels of trust between team members often have improved team member awareness and experience improved project outcomes (Hart & McLeod, 2003).

Virtual Team Norms and Rules

Established norms, such as the number of emails sent to other team members in a given time period, dictates how the virtual team functions. Virtual communication norms can develop over time or be developed by the team upfront. Well-established norms are crucial to virtual team efficiency and success (DeSanctis & Monge, 1999). This is because norms give team members a framework in which to work with others.

At MetLife, one virtual team manager established consistency in his weekly virtual team meetings by reviewing accomplishments and identifying problems that could impede project progress at the beginning of each meeting. This time was also structured to allow team members the opportunity to raise project issues. By establishing this routine in virtual meetings, team members communicated their needs, received support from one another and were up-to-date on the project progress by the end of each meeting. Hosting the meeting via videoconference once a month was also integral in building strong relationships among team members, which were cited as a critical component of the team’s success (Linkow, 2008).

Additionally, teaching members how to use technology and the appropriate etiquette for virtual interaction is important for establishing a positive team environment and ensuring tasks meet the highest standards. Without verbal or physical cues, communication and comprehension can often be difficult for team members. Learning to express personal emotions and comprehend others’ emotions virtually takes time (Hamilton & Scandura, 2003). Cultural differences can also exacerbate these challenges through misinterpretation and miscommunication. These factors should be considered when constructing and managing virtual teams.

Virtual teams must also address the challenges that inherently arise when members reside in multiple time zones. Establishing team meeting ground rules before virtual team tasks have been administered has been shown to mitigate many problems and misunderstandings between team

members. These rules include: circulating agendas in advance of meetings, respecting sleep and family schedules of all team members, discussing language abilities and ensuring the importance of attendance during meetings (Linkow, 2008). Instituting and adhering to these rules can make the difference between a successful and unsuccessful virtual team.

Virtual Team Member Training

Technology training for virtual team members is another critical aspect of building a successful team. Communication methods within virtual teams have been found to make them significantly more susceptible to miscommunication than conventional teams (Bergiel et al., 2008). As a result, offering introductory technology training courses and easy access to additional training is crucial for implementing the technology used by virtual teams. Team failures in multiple organizations have often been attributed to insufficient funding spent on training members to use programs and applications needed to communicate and complete their work.

To promote increased understanding of virtual teams and proper technology utilization, Nortel created an intranet page that included organizational best practices among virtual team leaders and members. This page provided a framework for a formal infrastructure that was later implemented within Nortel so that members of virtual teams would have clear guidelines as to how to communicate and initiate team processes virtually (Duarte & Snyder, 2006). This was done in tandem with significant company investments in new technologies that helped to ease the process of collaborating with team members virtually.

The process of building effective virtual teams often requires special training of the team leader. Providing a learning webpage for new virtual leaders to share knowledge with veterans in real-time has proven to be effective as well. At NASA, project managers have access to a “lessons learned” repository, where virtual team leaders can ask questions and get help from other virtual team leaders, creating an active knowledge center to improve leadership and facilitation practices (Duarte & Snyder, 2006).

These resources can be especially valuable for virtual leaders that are learning to give feedback through non-conventional methods, coach team members virtually and employ all effective technology mediums for the team. Taking action when team members’ behaviors are undesirable is also difficult for many virtual team leaders (Bell & Kozlowski, 2002). Failure to follow through on these issues, however, can be interpreted by some individuals as condoning poor performance of other team members and providing insufficient developmental feedback. This can directly impact team morale and motivation levels, resulting in a poor project outcome.

Team Building

Building a successful virtual team typically requires the support of the CEO and other executives. At American Express, the belief among senior leaders is that “promoting and supporting” virtual teams must come from the top (Duarte & Snyder, 2006). Besides this support and trust, building an

effective virtual team also requires navigation through many challenges. Cultural differences, time zones, language barriers and other factors should be taken in account before building a team. Adjustments and adaptations in team communication methods should be made to appropriately cater to all team members (Linkow, 2008). Leaders should play a proactive role in leading the team by adjusting to the unique needs of the individuals.

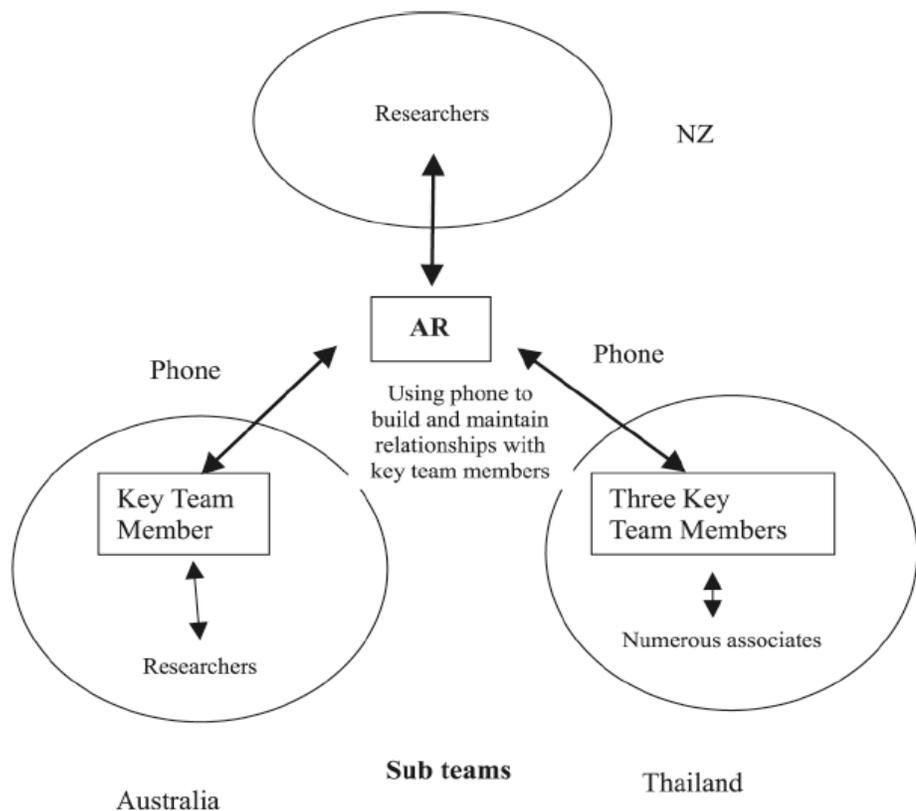
Once ensured that each member is trained on all the technologies utilized by the virtual team, leaders can assign tasks that will lead to the strengthening of relationships between members. This happens most frequently through collaboration, where one team member approaches another member for assistance on a specific task (Hart & McLeod, 2003). Ensuring time is allotted for teams to interact in this manner encourages stronger interpersonal relationships and a more effective virtual team. Many effective team leaders also prompt participants to contribute to the conversation during virtual update meetings (Dube & Pare, 2001). This can develop trust because team members can see the interdependencies among their contributions and the impact of their contributions on the project outcome.

In one large virtual team, the team leader paired some individual members with key team members, with whom she corresponded regularly. This created a “hub structure of three sub teams,” which resulted in a process by which individual contributors were able to frequently and effectively communicate issues with one another and their team leader. This improved team cohesion and trust among the hub workers as well as created opportunities for the team leaders of these sub groups to communicate important issues to the primary team leader. This method positively impacted motivation levels of the group and was a successful model for building an effective team (Pauleen, 2003).

Hub Virtual Team Model

(Pauleen, 2003).

Hub structure developed by AR to manage her virtual team



Time is another critical component in limiting differences seen in the socio-emotional processes of virtual team members. Disparities among members are less frequently seen in conventional teams because meetings are often face-to-face and members adjust simultaneously. However, there is increased variation seen in virtual teams because time to complete projects is frequently compressed and not all team members adjust emotionally in short periods or at the same rate (Powell et al., 2004). Team members should be aware of these differences and demonstrate patience as their teammates progress through these processes.

Conclusion

While it is evident that there are many difficulties associated with building and managing effective virtual teams, they are becoming more prevalent within organizations (Bell & Kozlowski, 2002). Navigating through these challenges successfully requires commitment from all team members. The most effective virtual teams have established high levels of trust, consistent task related communication between team members, strong team leadership and dedication to completing the tasks at hand.

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Annotated Bibliography

Bell, B. S., & Kozlowski, S. W. (2002). A typology of virtual teams: implication for effective leadership. *Group and Organization Management*, 27 (10), 14-49

Abstract: As the nature of work in today's organizations becomes more complex, dynamic, and global, there has been increasing emphasis on distributed, "virtual" teams as organizing units of work. Despite their growing prevalence, relatively little is known about this new form of work unit. The purpose of this article is to present a theoretical framework to focus research toward understanding virtual teams and identifying implications for effective leadership. The authors focus on delineating the dimensions of a typology to characterize different types of virtual teams. First, the authors distinguish virtual teams from conventional teams to identify where current knowledge applies and new research needs exist. Second, the authors distinguish among different types of virtual teams, considering the critical role of task complexity in determining the underlying characteristics of virtual teams and leadership challenges the different types entail. Propositions addressing leadership implications for the effective management of virtual teams are proposed and discussed.

Bergiel, B., Bergiel, E., and Balsmeier, P. (2008). Nature of virtual teams: a summary of their advantages and disadvantages. *Management Research News*, 31(2), 99-110. Retrieved from Business Source Complete database.

Abstract: Many of the elements that constitute successful face-to-face teams are also necessary for successful virtual teams. The key factors of success include:

- High levels of trust.
- Clear communication.
- Strong leadership.
- Appropriate levels of technology.

Nevertheless, virtual teams face certain obstacles, which can hinder high-level performance. Such barriers to success include:

- Multiple time zones.
- Language.
- Different approaches to conflict resolution.
- The failure or breakdown of trust, communication, leadership

DeSanctis, G., and Monge, P. (1999). Communication Processes for Virtual Organizations. *Organizational Science*, 10(6), 693-703.

Abstract: Communication is fundamental to any form of organizing but is preeminent in virtual organizations. Virtual organizations are characterized by (a) highly dynamic processes, (b) contractual relationships among entities, (c) edgeless, permeable boundaries, and (d) reconfigurable structures. Relative to more traditional settings, communication processes that

occur in virtual contexts are expected to be rapid, customized, temporary, greater in volume, more formal, and more relationship-based. To glean insight into communication processes for virtual organizations, we draw on the rich body of literature on synchronous and asynchronous electronic organizational communication. The vast set of empirical findings regarding mediated communication can foreshadow how communication will change as firms "go virtual." Six areas of electronic communication research provide implications for the major aspects of virtual organization design: (1) communication volume and efficiency, (2) message understanding, (3) virtual tasks, (4) lateral communication, (5) norms of technology use, and (6) evolutionary effects.

Duarte, D. L., & Snyder, N. T. (2006). *Mastering Virtual Teams*. San Francisco, CA: Jossey-Bass Publishers.

Abstract: In today's business environment, organizations adapt quickly or die. Gaining competitive advantage in a global environment means continually reshaping the organization to maximize strengths, address threats, and increase speed. The use of teams has become a common way of doing this. The formation of teams can draw talent quickly from different functions, locations, and organizations. The goal is to leverage intellectual capital and apply it as quickly as possible. The methods that organizations use to manage this process can mean the difference between success and failure.

Dubé, L., & Paré, G. (2001). Global virtual teams. *Communications of the ACM*, 44(12), 71-73.

Abstract: Global Virtual Team leaders should:

- Understand any cultural biases they may hold and how they may impact one's decision-making and thought processes;
- Develop a cultural training program for team members regarding factors that could influence team performance (such as time zone differences, norms, behaviors, decision-making, participation, and conflict resolution); and
- Create operational terms that may affect group performance to form common understanding of all members.

Hamilton, B.A., & Scandura, T. A. (2003). E-Mentoring: Implications for Organizational Learning and Development in a Wired World. *Organizational Dynamics*, 31(4), 388-402.

Abstract: Lack of assertiveness, inadequate social skills, fear of distortion of approach, and low comfort levels have all been found to limit the initiation of mentoring relationships. Traditionally these factors play a central role in face-to-face interactions. One who is not assertive and is lacking social skills may fear approaching others, especially those who hold higher rank. Research on Internet-based networks has found that feelings of belonging and support exist based on shared interests rather than shared social characteristics.

Handy, C. (1999). Trust and the Virtual Organization. *Harvard Business Review*, 73(3), 40-50.

Abstract: Effectively managing people we do not physically see is best done through trust. However, instilling trust without face-to-face contact is exceedingly difficult. With higher levels of virtual communication taking place within organizations, efforts should be made to ensure that face-to-face contact still occurs.

Hart, R. K., & McLeod, P. L. (2003). Rethinking team building in geographically dispersed teams: One message at a time. *Organizational Dynamics*, 31, 352-361.

Abstract: Given the importance of relationships in all teams, including geographically dispersed teams, how do work associates develop strong relationships when they are separated by time and space? What is the role of leaders in the development of these relationships in virtual teams? We address these questions here by offering a set of four lessons about leadership in geographically dispersed teams, drawn from what we learned after studying such teams in the field.

Jarvenpaa, S. L., & Leidner, D. E. (1999). Communication and Trust in Global Virtual Teams. *Organization Science*, 10 (6), 791-815.

Abstract: This paper explores the challenges of creating and maintaining trust in a global virtual team whose members transcend time, space, and culture. These challenges are highlighted by integrating recent literature on work teams, computer-mediated communication groups, cross-cultural communication, interpersonal and organizational trust. To explore these challenges empirically, we report on a series of descriptive case studies on global virtual teams whose members were separated by location and culture, were challenged by a common collaborative project, and for whom the only economically and practically viable communication medium was asynchronous and synchronous computer-mediated communication. The results suggest that global virtual teams may experience a form of swift trust but such trust appears to be very fragile and temporal. The study raises a number of issues to be explored and debated by future research. Pragmatically, the study describes communication behaviors that might facilitate trust in global virtual teams.

Linkow, P. (2008). Meeting the Challenges of Dispersed Workforce: Managing Across Language, Culture, Time and Location. *The Conference Board*, R-1432-08-RR, 1-43.

Abstract: The Conference Board established the Research Working Group on Managing Distant Workforce to explore the organization, managerial, and individual challenges of managing across different languages, cultures, time zones and locations and to identify effective approaches for addressing those challenges. Managers at five companies were surveyed and a small number of interviews and focus groups were conducted with high performing distance managers and their teams.

Pauleen, D. (2003) Leadership in a global virtual team: an action learning approach. *Leadership and Organizational Development Journal*, 24 (3), 153-162.

Abstract: This paper presents an action learning-based case study investigating how one virtual team leader coped with a number of issues associated with the completion of a critical organizational task in a virtual environment. Exploring this one virtual team leader's experiences and strategies opens a window for both practitioners and researchers. The insights shared by the team leader may lead to practical virtual team leadership strategies as well as avenues to research into virtual team leadership. The paper concludes with a discussion highlighting the important practical lessons learned about virtual team leadership and implications for practitioners and researchers.

Piccoli, G., Powell, A., & Ives, B. (2004). Virtual teams: A Review of Current Literature and Directions for Future Research. *Database for Advances in Information Systems*, 35, 6-36.

Abstract: Information technology is providing the infrastructure necessary to support the development of new organizational forms. Virtual teams represent one such organizational form, one that could revolutionize the workplace and provide organizations with unprecedented levels of flexibility and responsiveness. As the technological infrastructure necessary to support virtual teams is now readily available, further research on the range of issues surrounding virtual teams is required if we are to learn how to manage them effectively. While the findings of team research in the traditional environment may provide useful pointers, the idiosyncratic structural and contextual issues surrounding virtual teams call for specific research attention.

VIRTUAL LEADERSHIP: REQUIRED COMPETENCIES FOR EFFECTIVE LEADERS

Kurt Johnson, Graduate Research Assistant for CAHRS

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.

DEVELOPING GLOBAL MINDSET AND THE IMPACT ON VIRTUAL TEAMS

Maureen Martin, Comcast Graduate Research Assistant for CAHRS

Increasingly global and competitive in nature, today's work environment necessitates more cooperation, collaboration, and cross-cultural understanding than ever before. Many significant changes have altered the way companies conduct business. Companies now compete in a global economy that demands quality goods and services at competitive prices. Consumers, through increasing demand for better quality, force companies to remain competitive by providing (1) tailored solutions for specific needs and (2) responding rapidly to market changes. In this global context, speed and personalized solutions create customer growth. But how do multinational companies respond to these two often competing forces? Expanding on the concept of traditional teams, one solution has been to institute virtual teams composed of diverse members best suited to a variety of projects. Consistent with the increasingly global context in which these teams operate, members of virtual teams must be dynamic, flexible, and culturally intelligent in order to speedily deliver tailored products and services globally.

Considering the increased use of virtual teams, this paper aims to explore the role of a global mindset in overcoming the challenges associated with working across cultures, especially when such teamwork occurs at a distance. Next, the differences between local and global mindsets will be discussed and essential global competencies identified. Finally, strategies for developing a global mindset in leaders and employees will be outlined.

Challenges for Global Managers

Globalization texts have traditionally focused on the role of very large multinational companies with foreign operations. Today, even very small firms have the capability to be global. Managers and employees at all levels, as well as customers, are affected by globalization. This inevitably brings about interactions and relationships among people who are culturally different (Thomas & Inkson, 2009). These interactions and relationships are not confined to expatriates living and working abroad. They include communication through international phone calls and e-mail and interaction with colleagues and clients. Despite the increased ease of communication, cultural differences are present and challenge these methods of communication. While other aspects of the global environment are observable, culture is largely invisible and often overlooked. Therefore, it is imperative for managers to have a global mindset in order to recognize and overcome the challenges associated with working across cultures.

The Case for Global Mindset

As defined by Evans, Pucik, and Barsoux (2002), a global mindset is a set of attitudes that predispose individuals to cope constructively with competing priorities (for example global versus local priorities) rather than advocating one dimension at the expense of others. A key concept of global mindset is the ability to accept and work with cultural diversity (Evans et al., 2002).

Figure 1. Global mindset compared to traditional “domestic” i.e. local mindset. Globally-minded managers must exhibit the personal characteristics underlying a global mindset.

Local Mindset	Global Mindset	Personal Characteristics
<ul style="list-style-type: none"> • Functional expertise • Prioritization • Structure • Individual responsibility • Predictability • Trained against surprises 	<ul style="list-style-type: none"> • Broad and multiple perspectives • Duality - balance between contradictions • Process • Teamwork and diversity • Change as opportunity • Open to what is new 	<ul style="list-style-type: none"> • Knowledge • Conceptual ability • Flexibility • Sensitivity • Judgment • Learning

Global v. Local Mindset

To be certain, global mindset helps to differentiate between expatriates and global managers. Whereas expatriates are defined by location, global managers are defined by their state of mind and ability to work across cross-cultural boundaries (Evans et al., 2002). Thus, not all expatriates are global managers and not all global managers work internationally; the difference is mindset and approach to problem-solving.

Rhinesmith (1993) compared managers with global and traditionally domestic i.e. local mindsets and found six ways to differentiate these groups (see Figure 1 above). Unlike managers with local mindset, globally-minded managers have broader perspectives, are suspicious of “one-best-way” solutions, and try to understand the context for decision-making. By balancing contradictions, these managers are more capable of handling tensions arising from conflict. When dealing with ambiguity and the need for adaptation, managers with global mindset trust process rather than structure. They also value diversity to be channeled through teamwork and view change as an opportunity rather than a threat. Finally, globally-minded managers are open to the constant need to redefine boundaries.

This idea – the importance of mindset over physical location – is acknowledged by firms such as Unilever and Dupont who believe that all senior managers must have successful international experience, even for positions in their own countries (Evans et al., 2002). Yet, as discussed above, international experience alone does not necessitate global mindset. Consider firms’ increased use of virtual teams; regardless of location, members of virtual teams must have a global mindset in order to communicate with members from different cultures and backgrounds. When working in virtual teams, a global mindset is essential for maximizing individual as well as overall team effectiveness. The unique characteristics, challenges, and dynamics of virtual teams as they relate to a global mindset will be discussed in more detail below.

Challenges of Virtual Teams

Unique Characteristics & Challenges of Virtual Teams

Research suggests that virtual teams possess several unique characteristics that distinguish them from conventional, face-to-face teams (Bell & Kozlowski, 2002). Two main characteristics classify teams as virtual – physically distributed members and communication through a number of synchronous (simultaneous) and asynchronous (delayed interaction) methods such as phone, audio and video conferencing, and e-mail.

Geographic dispersion and lack of face-to-face communication create new challenges for members of virtual teams. Research shows that geographic dispersion among people generates negative outcomes, such as a decline in communication, mutual knowledge problems, and work coordination difficulties (Weisband, 2008). Declines in opportunities for communication are even more problematic when such communication lacks face-to-face contact and nonverbal cues. As suggested by Earley and Gibson (2002), people rely primarily on nonverbal signals to help them navigate social interactions. These nonverbal cues affect both the way in which people work and the quality of their work in a team. The absence of nonverbal cues in turn increases opportunities for ambiguity. This ambiguity implies greater uncertainty, especially when processing information and making sense of various tasks and members' perspectives. Thus, virtual teams need to overcome powerful barriers to effectiveness.

Dynamics of Global Virtual Teams

Global virtual teams (GVTs) span time zones, geographical boundaries, and are frequently composed of diverse members representing different disciplines, functions, professions, business units, organizations, countries, and cultures. In general, the greater the number of differences among members, the greater are team barriers to effectiveness (Gibson & Cohen, 2003). This is especially true when virtual team members are composed of members from different countries and cultures who face pressure to pursue local priorities rather than team objectives. Indeed, casual, face-to-face contact with local colleagues of similar backgrounds and cultures, cultural differences among members, and time zone differences that reduce opportunities for communication are all forces that inhibit global mindset among members which in turn reduces overall team effectiveness (Kerber & Buono, 2004).

Global Virtual Team Effectiveness

While numerous challenges and forces act against virtual team effectiveness, virtual teams can amplify the benefits of teamwork; the higher the degree of virtuality and differences, the higher the potential benefit (Gibson & Cohen, 2003). Furthermore, when virtual teams are composed of members from different perspectives and knowledge bases (as in global virtual teams), innovation is more likely to occur.

Enabling Conditions

To maximize virtual team effectiveness, two important enabling conditions must be established (Gibson & Cohen, 2003). First, members need to develop a shared understanding about their goals, processes to achieve them, tasks, and knowledge about each team member's knowledge, skills, and abilities. In global virtual teams, team members will have different "thought worlds" regarding ways of perceiving their tasks, key issues, and making sense of their situation; shared understanding helps virtual team members bridge these differences. Equally important is the establishment of mutual trust, defined as a shared psychological state characterized by Gibson and Cohen (2003) as "an acceptance of vulnerability based on expectations of intentions or behaviors of others within the team" (p. 9). Mutual trust is important to create a safe and open environment for members to give ideas and take risks. However, this trust is particularly difficult to establish in global virtual teams. The challenge relates back to the unique characteristics of virtual teams; electronically-mediated communication lacks the nonverbal cues that are essential for building trust. Therefore, managers of global virtual teams must have an understanding of cultural differences and the ways in which he/she can adapt leadership style and communication skills to establish the conditions necessary for virtual team effectiveness. Consistent with the personal characteristics underlying a global mindset, managers must be sensitive to cultural differences, value diversity of opinion and thought processes, and be willing and able to adapt their leadership style according to team dynamics and situations.

Competencies for Managers of Global Virtual Teams

Indeed, the main finding of this paper is that managers with a global mindset are uniquely positioned to create the enabling conditions discussed above and combat the dynamics that threaten to pull global virtual teams apart. Leadership, cultural intelligence, and communication and interpersonal skills are essential for a global mindset that maximizes virtual team effectiveness.

Cross-Cultural Leadership

Undeniably, cross-cultural leadership is an important competency of global mindset. Among other things, effective cross-cultural leadership has implications for developing trust and building relationships, facilitating communication, encouraging collaboration, and managing conflict. The KSAs for leaders of traditional, face-to-face teams are necessary but insufficient competencies for leading a global virtual team of diverse members. For example, Evans et al. (2002) cited an experimental study of virtual teams composed of members from different countries; the study showed that, consistent with the characteristics of global mindset, cross-cultural leaders were effective due to their adaptability in various situations and capacity to deal with paradox by performing contrasting leadership roles simultaneously. In their famous GLOBE study of 62 societies, House et al. (2004) found that while certain leadership attributes were universally effective across any culture, other attributes were culturally specific. In all cultures, leader team orientation and the communication of vision, values, and confidence in followers were reported to be highly effective leader behaviors. Consistent with Evans' et al. (2002) findings, House et al. (2004) concluded that "knowing what is considered to be effective or ineffective in the cultures with which one interacts is likely to facilitate conflict resolution and improve the performance of

interacting individuals” (p. 7). Therefore, in the absence of a “one best way” approach, cross-cultural leaders are most adept at recognizing when and how to adapt their leadership styles to different cultures.

Cultural Intelligence

In its broadest sense, cultural intelligence is the ability to interact effectively with people from different cultural backgrounds (Thomas & Inkson, 2009). Possessing cultural intelligence enables individuals to recognize cultural differences, adjust to new cultures and situations, understand local practices, and behave appropriately and effectively (Earley et al., 2006). The culturally intelligent person suspends judgment until information beyond the other person’s ethnicity becomes available (Triandis, 2006). To be certain, cultural awareness and sensitivity are critical to shared understanding and virtual team effectiveness. Gibson and Cohen (2003) posits that the most distinctive feature of global virtual teams is context, defined as a way of life and work in a specific geographical area with its own set of business conditions, cultural assumptions, and unique history. Accordingly, members of GVTs live and work in different contexts. Because GVT members often take context for granted, cultural competence among managers and employees and openness to different ways of working are paramount to team effectiveness.

Communication & Interpersonal Skills

The characteristics of global virtual teams make the mastery of communication and interpersonal skills even more important. By their nature, members of global virtual teams are not native speakers of the same language even if they all use a common language to communicate in the team (Gibson & Cohen, 2003). Because of time and distance, communication is generally limited to relatively short episodes. In addition, research suggests that the greater the cultural differences are between sender and receiver, the greater is the expected difficulty in communicating (Pantelli & Chiasson, 2008).

Though initially daunting, globally minded leaders and managers can overcome these challenges by addressing the enabling conditions of virtual team effectiveness; that is, by developing a shared understanding and building trust among members. Accordingly, communication to build shared understanding should include clarity around goals, tasks, and procedures to reduce ambiguity. Open and prompt communication among members should be used to build trust, resulting in cooperative relationships. Especially in the case of global virtual teams, leaders must facilitate open communication to increase information exchange about the process and relevant tasks, other members’ credibility and trustworthiness, as well as common values and team norms. When working across cultures, globally minded managers must keep contextual differences in mind. Language styles (implicit versus explicit), message content (fact versus emotion-based), and the way in which messages are conveyed (through formal or informal channels) all must be taken into account and tweaked to communicate more effectively (Gibson & Cohen, 2003).

Strategies for Developing Global Mindset

The basic characteristics of global mindset, as discussed previously, are the use of broad and multiple perspectives as well as the ability to balance between contradictions, value diversity, foster teamwork, and exhibit openness. Regarding global virtual teams, cultural intelligence teaches employees and managers ways to effectively work across cultures. Interestingly, Thomas & Inkson (2009) noted a paradox of cultural intelligence. That is, in order to acquire cultural intelligence one must practice by working in culturally different environments and/or with culturally different people; however, in order to work effectively with these different people in different environments, one needs to first be culturally intelligent. Indeed, a variety of experiences and training involve strategies for developing cultural intelligence and facilitating global mindset in managers and employees.

Experiences

International transfers and assignments, membership in cross-border project teams and task forces, and regional or global coordination roles are all strategies for developing global mindset. Typically reserved for leaders and high potentials, Evans et al. (2002) believes that international transfers and assignments are the strongest mechanisms for developing global mindset. The reasoning is that these international experiences foster the development of integrative leadership skills, develop skills in handling cultural diversity i.e. cultural intelligence, and develop “doing” and “being” skills such as championing global strategy, facing conflict, and handling complexity. Cross-border project teams and task forces are a less expensive option that allows individuals to work through local versus global pressures and related problems. Their purpose is to bring team members of different perspectives together to learn a set of skills underlying global mindset. This skill set includes the abilities to work with people who have different perspectives, set goals on ambiguous tasks, and work through interpersonal conflict. Regional and global coordination roles have a similar purpose; individuals in these roles are purposely exposed to competing priorities, multiple perspectives, and teams with diverse membership. Again, the purpose of all these experiences, whether or not they involve relocation, is a shift from local to global mindset.

Training

To be certain, today’s large organizations need managers who are able to quickly adapt to multiple cultures and work well in multinational teams. The challenge is the same for members of global virtual teams. However, conventional methods of cultural training that rely on country-specific knowledge are inadequate especially in the case of global virtual teams with members representing multiple countries, languages, and cultures. To address these issues, Earley & Peterson (2004) discuss a new conceptual framework for intercultural training called the Cultural Intelligence or CQ approach (Earley & Ang, 2003). Training around cultural adaptation is based less on teaching culture-general values and/or culture-specific knowledge and more on assessing a manager’s specific competencies to provide training in various methods. In this case, the specific training methodology (role-play exercises, lecture, case studies, etc.) is less important than training content. Instead, managers are assessed on various CQ competencies and subsequent training is based on individual weaknesses. With CQ training to develop weaknesses, successful members of global

virtual teams will be able to find commonalities across members, determine effective and appropriate role allocations, and clearly define rules for interaction based on the needs and interests of team members (Earley & Peterson, 2004).

Triandis (2004) discusses practical approaches to building cultural intelligence in which individuals are taught to integrate large amounts of information, look for cues, and suspend judgment until collecting enough information. Training involves overcoming ethnocentrism, stressing the importance of empathy and placing oneself in the shoes of another's culture, and remaining open-minded to other cultures and methods of accomplishing tasks. The use of cultural assimilators, short case studies focusing on critical incidents leading to misunderstandings or miscommunication, is another technique designed to expose members of one culture to basic concepts and attitudes of another culture. Applied in a broader context, cultural assimilators can be used to teach how to approach and think about the concepts, attitudes, perceptions, customs, and values of culturally-dissimilar team members in multicultural teams.

Given the ever-increasing costs of international assignments, many companies today use in-house training targeted at a broader cross-section of employees to speed up the dissemination of global mindset. Cross-border projects, experiential methodologies, and action learning are key training methods for developing global mindset (Evans et al., 2002). Training methods at GE and IBM provide good examples. GE's management development staff in Crotonville designed intensive, experiential action learning programs with the aim of fostering the globalization of GE. As part of these (typically four-week) programs, multicultural action learning teams of GE managers were sent to China, the former Soviet Union, and India to work on specific, regional problems and collect information on best and worst practices. IBM learning executives, tasked with creating an environment consistent with the characteristics of global mindset, highlighted a number of practices including action learning teams similar to GE's model and worldwide training rollouts addressing the unique cultural differences in different regions (Lesser, 2007). Theoretically, any training designed to engage managers in exchanging ideas and solutions to business problems can be helpful in developing characteristics for thinking globally. Training methods to recognize different contexts and ways of adaptation are consistent with developing the global mindset advocated throughout this paper.

Conclusion

Undoubtedly, the global economy forces companies to participate in a highly volatile, customer-driven market for quality products and services at competitive prices. At the same time, globalization necessitates communication with colleagues, clients, and customers across languages and cultures. The increased use of virtual teams is just one way companies are responding to global demands. Considering the rise of virtual teams, global mindset among leaders, managers, and employees is essential to overcoming challenges associated with working across languages and cultures. Indeed, various international assignments, cross-boundary teams, and cultural adaptation training can be used to develop individual weaknesses around global competencies. Leadership style awareness and flexibility, cultural intelligence, and communication and interpersonal skills to develop a shared understanding and build trust are key competencies of global virtual team effectiveness. Given the numerous challenges and forces acting against virtual teams, developing globally-minded managers is more important than ever. Managers with a global mindset are better able to maximize global virtual team effectiveness. When effectively managed, global virtual teams amplify the benefits of teamwork and possess greater innovation potential than traditional, face-to-face teams.

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Bell, B. & Kozlowski, S. (2002). *A typology of virtual teams: Implications for effective leadership*. Retrieved February 25, 2010 from <http://gom.sagepub.com/cgi/reprint/27/1/14>.

Abstract: As the nature of work in today's organizations becomes more complex, dynamic, and global, there has been increasing emphasis on distributed, "virtual" teams as organizing units of work. Despite their growing prevalence, relatively little is known about this new form of work unit. The purpose of this article is to present a theoretical framework to focus research toward understanding virtual teams and identifying implications for effective leadership. The authors focus on delineating the dimensions of a typology to characterize different types of virtual teams. First, the authors distinguish virtual teams from conventional teams to identify where current knowledge applies and new research needs exist. Second, the authors distinguish among different types of virtual teams, considering the critical role of task complexity in determining the underlying characteristics of virtual teams and leadership challenges the different types entail. Propositions addressing leadership implications for the effective management of virtual teams are proposed and discussed.

Bellingham, R. (2001). *The manager's pocket guide to virtual teams*. Amherst, MA: HRD Press.

Abstract: This succinct guide to virtual teams discusses the skills necessary for managers to establish a strong foundation in their teams as well as methods for working within the virtual team environment. The steps important for laying the groundwork of a successful team are outlined followed by a discussion of leadership and how to facilitate teamwork and manage effective communications.

Earley, P. & Ang, S. (2003). *Cultural intelligence; Individual interactions across cultures*. Stanford, CA: Stanford University Press.

Abstract: Cultural intelligence is defined as a person's capability for successful adaptation to new cultural settings, that is, for unfamiliar settings attributable to cultural context. The book is organized into two major sections: Part I consists of a general introduction and presentation of the theory of cultural intelligence; Part II consists of measurement and application issues in using the concept of cultural intelligence in a work context.

Earley, P., Ang, S., & Tan, J. (2006). *Developing cultural intelligence at work*. Stanford, CA: Stanford University Press.

Abstract: The challenge of globalization has left companies to struggle with national, regional, and local differences among their employees, shareholders, and customers. The idea of cultural

intelligence is introduced and its implications for managers in diverse work environments discussed. The focus of the book is to offer a consistent and new way of thinking about cultural differences from a personal standpoint. To this end, a self-assessment is provided so that the reader can focus on weak areas and seek improvement.

Earley, P. & Gibson, C. (2002). *Multinational work teams; A new perspective*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Abstract: When adopting team-based systems across their global facilities, multinational organizations face special challenges. To date, a unifying theory regarding the process of team implementation and how to incorporate the cultural backgrounds of team members is non-existent. The purpose of this book is to extend and consolidate the evolving literature on multinational teams by developing a comprehensive theory that incorporates a dynamic, multi-level view of teams.

Earley, P. & Mosakowski, E. (2004, October). Cultural intelligence. *Harvard Business Review*. 139-146.

Abstract: Cultural intelligence is related to emotional intelligence, but it picks up where emotional intelligence leaves off. Cultural intelligence is defined as an outsider's seemingly natural ability to interpret someone's unfamiliar and ambiguous gestures the way that compatriots would. Given this definition, three sources of cultural intelligence are subsequently discussed along with six cultural intelligence profiles and six steps for cultivating one's own cultural intelligence.

Earley, P. & Peterson, R. (2004). The elusive cultural chameleon: Cultural intelligence as a new approach to intercultural training for the global manager. *Academy of Management and Learning and Education*. 3(1). 100-115.

Abstract: The global economy and shifting political tides make the need for intercultural understanding and education obvious. Where historically the focus of intercultural training has been on preparing an individual to work in a new culture, today's organizations routinely ask managers to work in multinational environments and move from country to country. This challenge has created a strong debate about how to prepare managers for such challenging assignments. How ought people be assessed to understand their readiness for such assignments? Do high intelligence quotient (IQ) people adjust better than others to new cultural challenges? The topic of cultural adjustment and its assessment remains compelling but incomplete. The focus here is the development and exploration of the concept of cultural intelligence, or CQ, along with its implications for training and education for global work assignments. Our approach suggests that training for the global manager should include metacognitive, motivational, and behavioral components. The QC approach represents a significant break from conventional wisdom of focusing on cultural values for intercultural education.

Edwards, A. & Wilson, J. (2004). *Implementing virtual teams*. Burlington, VT: Gower Publishing Company.

Abstract: Being targeted at virtual team novices and veterans alike, this book covers all the basics as well as providing food for thought for more experienced participants and virtual team managers. The book is organized into four parts. Parts I and II offer answers to a diverse range of questions regarding the appropriateness of virtual teams, challenges, available technologies, and strategies to ensure virtual team success. Part III contains a number of case studies demonstrating both successes and failures in virtual team implementation. Part IV is designed as a mini-handbook on the implementation of virtual teams.

Evans, P., Pucik, V., & Barsoux, J. (2002). *The global challenge: Frameworks for international human resource management*. New York: McGraw-Hill/Irwin.

Abstract: This book focuses on the human resource management challenges that accompany the process of internationalization and how to operate in an interconnected world where people are the source of sustainable competitive advantage. Designed for use on MBA and executive programs at business schools, the authors define the concept of a “global mindset” and aim to help people understand global mindset and the deeper set of attitudes that are needed to thrive in a world increasingly characterized by paradox and duality.

Fiedler, F., Mitchell, T., & Triandis, H. (1971). *The culture assimilator: An approach to cross-cultural training*. *Journal of Applied Psychology*. 55(2). 95-102.

Abstract: The construction of self-administered programmed culture training manuals, called culture assimilators, is described here. These programs provide an apparently effective method for assisting members of one culture to interact and adjust successfully with members of another culture. Culture assimilators have been constructed for the Arab countries, Iran, Thailand, Central America, and Greece. This article describes the steps involved in the development of these programs, and reviews studies validating the culture assimilator programs under laboratory and field conditions.

Gibson, C & Cohen, S. (2003). *Virtual teams that work; Creating conditions for virtual team effectiveness*. San Francisco, CA: Jossey-Bass.

Abstract: This book focuses on how organizations should go about creating the conditions for effective virtual teamwork. Indeed, virtual teams can be either dramatic successes or dismal failures and anywhere in between. Virtual teams that are designed, managed, and implemented effectively can harness talent from anywhere in the globe to solve business problems, service customers, and create new products. Written by authors of diverse backgrounds themselves, the book’s chapters respond to questions that practitioners face when they decide to implement virtual teams.

Godar, S. & Ferris, S. (2004). *Virtual and collaborative teams*. Hershey, PA: Idea Group Publishing.

Abstract: By breaking down the barriers of space and time, a virtual team fully utilizes the expertise of members of an organization without pulling them from other projects or incurring relocation expenses. Hence, at least notionally, such teams have immense potential for improving organizational effectiveness. This book takes a cross-disciplinary approach about whether, why, and how virtual teams do or do not fulfill their potential. The book is broken down into four sections. Section I describes the make-up of virtual teams; Section II discusses how to effectively lead virtual teams; Section III focuses on communication in virtual teams; Section IV describes the effective uses of virtual teams.

House, R., Hanges, P., Javidan, M., Dorfman, P. & Gupta, V. (2004). *Culture, leadership, and organizations; The GLOBE study of 62 societies*. Thousand Oaks, CA: Sage Publications, Inc.

Abstract: The GLOBE (Global Leadership and Organizational Behavior Effectiveness) Study is an analysis of the cultural, societal, organizational, and leadership differences between 62 different societies around the world. Conducted by the Wharton Business School of the University of Pennsylvania, its team of 170 researchers aim to determine the extent to which the practices and values of business leadership are universal (i.e., are similar globally), and the extent to which they are specific to just a few societies.

Kerber, K. & Buono, A. (2004). *Leading a team of change agents in a global corporation: Leadership challenges in a virtual world*. Retrieved February 25, 2010 from http://www.simmons.edu/gradstudies/docs/mcm/bf_virtual.pdf.

Abstract: The pressures associated with getting new products and services to worldwide markets are prompting organizations to choose the best people for projects, regardless of their location. This development has resulted in a rapid increase in distributed work groups, or virtual teams as they are more commonly known. Like any team, a virtual team is a group of people who work on interdependent tasks guided by a common purpose. But unlike traditional, collocated teams, a virtual team works across space, time, and organizational boundaries that often extend across nations on a global basis (Lipnack & Stamps, 1997). Through advanced communication technologies, global teams are developing the ability to “work together apart” (Grenier & Meters, 1992), completing assigned projects while rarely, if ever, meeting face-to-face. Yet, while a growing number of organizations are increasingly using virtual teams for a variety of different purposes and functions, there are lingering questions about the effectiveness of such teams, the role that team leaders should play, and the types of interventions that change agents can use to launch and sustain these teams over time. This paper examines these questions through a field study of a global virtual team and concludes with recommendations for effectively leading teams in a virtual world.

Lesser, E. (2007). *Innovation: Shifting the strategic focus of learning*. Retrieved February 25, 2010 from http://www-935.ibm.com/services/uk/bcs/pdf/innovation_shifting_strategic_focus_of_learning.pdf.

Abstract: Learning executives are seeking to drive innovation within their organizations and establish a more active role in the development of new business models, the creation and deployment of new products and services, and the development of new internal services and delivery channels. To accomplish this, they should begin thinking outside their traditional mandate of delivering formal course material and adopt a scope of work that facilitates a more strategic organizational role.

Pantelli, N. & Chiasson, M. (2008). *Exploring virtuality within and beyond organizations*. New York: Palgrave Macmillan.

Abstract: This book argues that there has been a limited conceptualization of virtuality and its implications on the management of organizations. Based on illustrative cases, empirical studies, and theorizing on virtuality, the authors go beyond the simple comparison between the virtual and traditional to explore the different types, dimensions, and perspectives of virtuality.

Rhinesmith, S. (1993). *A manager's guide to globalization*. Burr Ridge, IL: Business One Irwin.

Abstract: Based on his experience training over 5,000 managers from 35 different countries, the author addresses the key questions about what globalization means for jobs, mindsets, and skills. The book shows how to understand the forces driving companies to go global, how to manage the conflicts and contradictions of global matrix organizations, and how to lead multicultural teams comprised of people from many different backgrounds.

Sadowski-Rasters, G., Duysters, G, & Sadowski, B. (2006). *Communication and cooperation in the virtual workplace*. Northampton, MA: Edward Elgar Publishing, Inc.

Abstract: This study explores how social, organizational, and institutional factors complement technological factors in the development of computer-mediated communication in teams. Through the use of theory, case studies, and reflection, the authors seek to identify the conditions that enable or constrain the virtual collaboration process.

Thomas, D. & Inkson, K. (2009). *Cultural intelligence; Living and working globally*. San Francisco, CA: Berrett-Koehler Publishers, Inc.

Abstract: This book applies the concept of cultural intelligence broadly to the interactions of people not just in organizations, but also in their daily lives. Simply stated, the book is about becoming more effective in dealing with people from different cultural backgrounds. The authors

first outline the fundamentals of cultural intelligence and then apply the fundamentals of cultural intelligence to a number of common interpersonal challenges in multicultural settings.

Triandis, H. (2006). Cultural intelligence in organizations. *Group & Organization Management*. 31(1). 20-26.

Abstract: Successful interaction across cultures requires cultural intelligence. Several aspects of cultural intelligence in organizations are described: suspending judgment until enough information about the other person becomes available; paying attention to the situation; cross-cultural training that increases isomorphic attributions, appropriate affect, and appropriate behaviors; matching personal and organizationally attributes; increasing the probability of appropriate organizational practices.

Weisband, S. (2008). *Leadership at a distance; Research in technologically-supported work*. New York: Lawrence Erlbaum Associates, Inc.

Abstract: This book examines the complex phenomenon of leadership in distributed work settings, or leadership at a distance. Indeed, leaders in all functions head distant teams using a range of technologies. The book begins with an overview of the challenges leaders face in the 21st century, describes field studies and new ways of thinking about leadership in distributed work settings, experiments with group dynamics and social processes involved in leading distant teams, and ends with a presentation of research on leadership in large-scale distributed collaborations.

CHALLENGES AND INTERVENTIONS IN MONITORING AND EVALUATING VIRTUAL TEAM PERFORMANCE

Rex Fitzpatrick, Graduate Research Assistant for CAHRS

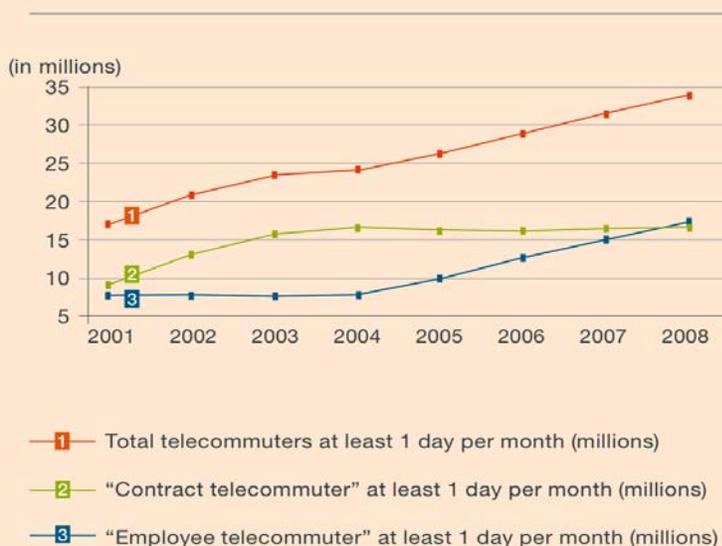
With the increasingly global nature of our economy, heightened complexity of jobs, emphasis on enterprise agility, and an increase of American telecommuters (approximately 17.2 million in 2008 compared to 12.4 million in 2006* (“Telework Trendlines,” 2009), many companies have adopted distributed, or “virtual”, teams into their organizational structures to successfully operate in changing business conditions.

Research suggests that the implementation of virtual teams can provide organizations with many potential benefits—remote working options to greater attract and retain employees (Cascio, 2000), enhanced project decision quality stemming from the firm’s ability to place the best individuals together on a team regardless of geographical location (Lipnack & Stamps, 1999), closer contact to customers worldwide (Solomon, 2001), along with a host of others. However, the benefits afforded by virtual teams are also coupled with many challenges—such as effectively monitoring and evaluating virtual team performance.

This paper aims to provide insight into what current research has identified as the major roadblocks in monitoring and evaluating virtual team performance, along with research-derived recommendations regarding how to improve upon these challenges.

FIGURE 1: Telecommuter Trendline

“Employee telecommuter” is a full- or part-time employee who works remotely at least one day per month. A “contract telecommuter” is a self-employed individual who works remotely at least one day per month. Data for 2007 are estimates only; the survey was not conducted in 2007.



*Source: “Telework Trendlines 2009”, WorldatWork

Virtual Team Monitoring and Evaluation Challenges

When considering the many potential challenges of having and supporting a virtual team, only a handful can compare with the difficulty that comes with monitoring and evaluating performance. University of Colorado, Boulder business professor Wayne Cascio (1998) suggests that performance management is by far the biggest challenge of virtual teams.

Considering the additional obstacles faced by managers of virtual teams compared to managers of traditional teams, it becomes clear why Cascio (1998) put forth that statement.

Physical Observation Limitations

One of the largest and most obvious challenges in monitoring virtual team performance is the inability of managers to physically observe their employees' performance and efforts, and how to implement effective methods for going about measuring productivity, building trust, and managing teams given their particular constraints (Kirkman, Rosen, Gibson, Tesluk, & McPherson, 2002). If managers are unable to observe their subordinates in action, they are less likely to be able to determine where their employees are struggling and where they excel, rendering the manager unable to provide constructive performance feedback and harness the full potential of their team. As a result, monitoring and measuring performance remain problematic and sources of concern (Kurkland & Bailey, 1999).

Employee Equity and Organizational Justice Issues

Virtual team members may feel organizational injustice when compared to those who are present in the actual workplace. Research by Wright and Oldford (1993) finds that a large number of employees' primary reluctance about virtual work and telecommuting rests on concerns of isolation. Professionally, employees fear that being "out of sight" infers being "out of mind" for advancement and other organizational rewards. This becomes a significant challenge when evaluating members of virtual teams against those at the physical office (Kurkland & Egan, 1999). Further, it is often perceived that when the outcomes employees receive are not aligned with their respective inputs, they tend to scale back their effort to a level in accordance to the outputs received, or even consider leaving the organization altogether (Dittrich & Carrell, 1979).

Barriers to Team Performance Knowledge and Awareness

Another roadblock when monitoring virtual team performance is the manager's lack of knowledge to create an environment that fosters high levels of performance, and possible ignorance of how to return the virtual team to that high-performance atmosphere when issues cause it to derail. Research by Potter, Balthazard, and Cooke (2000) suggests that individuals who exhibit constructive—as opposed to passive or aggressive—behaviors with other virtual team members produce solutions that are superior in quality to those produced by passive groups and superior in acceptance to those produced by either passive or aggressive groups. They go on to propose that those passive and aggressive interaction styles are intensified in virtual teams (Potter et al., 2000). Other research has also found that teams with high-performance levels establish trust quickly at the beginning of a project, and maintain that high level throughout, compared to virtual teams with lower average performance (Kanawattanachai & Yoo, 2002). A manager who does not understand such nuances and root causes that differentiate low- and high-performing teams face a clear challenge in effectively monitoring and evaluating virtual team performance.

Overemphasis on Output Evaluation

Evaluating virtual team performance might prove problematic when managers narrowly focus on outcomes rather than process—especially when those results prove difficult to measure and

monitor. As in traditional job settings, certain jobs lend themselves to easier outcome evaluation and monitoring in virtual team settings compared to others. However, when objective, outcome-based measures of performance are unavailable, the ability of virtual team managers to accurately ascertain performance becomes increasingly difficult considering their reduced capability to observe and measure the process. According to one manager surveyed by Kurkland and Bailey (1999), appropriate measures to evaluate performance were not readily available, causing a source of frustration in regards to virtual teams.

Virtual Team Monitoring and Evaluation Interventions

From the previous section it becomes apparent that monitoring and evaluation of virtual teams come with their own unique challenges. Nevertheless, numerous interventions and strategies to improve upon these challenges, in addition to increasing virtual team performance generally, have been identified through empirical and experimental research.

The “Balanced Scorecard”

One successful strategy identified by this research that organizations can consider when evaluating virtual team performance is to create a comprehensive assessment process, or balanced scorecard, based on business priorities. Kirkman et al.’s (2002) research of Sabre Inc. provides a sample model by which to create this scorecard. Consisting of that company’s values in the fields of growth, profitability, process improvement, and customer satisfaction, Sabre is able to monitor each team’s customer satisfaction via annual customer service goals. By doing this, virtual team managers have an external (albeit subjective) basis for evaluating and rewarding virtual team performance within this particular organization (Kirkman et al., 2002). Creating objective performance appraisals against an organization’s various scorecard dimensions enables managers to have a far more transparent understanding of the effectiveness of their virtual team and create more standardized methods of evaluating future virtual team performance. Consequently, Kurkland and Egan’s (1999) aforementioned equity and justice issues are also being addressed, as both virtual teams and teams in a physical office are being compared against the same set of criteria.

Increasing Information Flow

As mentioned previously, fostering an atmosphere that enhances virtual team performance is crucial to effectively monitoring and evaluating it. According to Kerber and Buono (2004), performance management in virtual teams is facilitated when team leaders maximize information flow. A study conducted by Rafaeli and Ravid (2003) found a relationship between information sharing and team profit (this particular study’s codification of performance)—those teams that shared more information (in their case, email communication) experienced levels of increased performance compared to those who shared less information. Davis and Khazanachi (2007) support this concept even further by indicating that the facilitation of shared, or mutual, knowledge among virtual team members increases overall performance. According to that study, mutual knowledge has the potential to positively affect virtual team inputs, socio-emotional processes, task processes, and outputs. Virtual team project managers can establish mutual knowledge among team members

through initial introduction and team building activities as well as giving members access to descriptive project documentation, which lists acronyms and other project specifics important for team members to understand (Davis & Khazanchi, 2007). It is also important to mention that the enormous challenges involved in managing and monitoring a virtual project make it even more important that virtual team communications are “noise-free” (Davis & Khazanchi, 2007; Jackson, Klobas & Gharavi, 2006).

Utilization of Alternative Sources of Information during Evaluation

In addition to evaluating virtual team performance against objective measures laid out in the balanced scorecard or other index, managers can also assess individual team member performance, both objectively as well as subjectively. Kirkman et al. (2002) provide various individual performance measures like number of items produced, accuracy of financial contracts, development of new business, and customer retention as objective, quantifiable measures of evaluating individual performance on virtual teams. They also pose that virtual teams have an advantage over traditional teams, as they are much less susceptible to favoritism, stereotyping, or other contaminating perceptual biases (Kirkman et al., 2002). Moreover, virtual team managers can track virtual team member behavior (e.g. taking leadership roles during virtual team meetings, coaching new team members off-line, suggesting internal quality improvement strategies) and other intangibles that increase team performance. Research indicates that virtual team managers may have an advantage in regards to tracking such intangible actions compared to those in charge of face-to-face teams, as electronic discussions, team emails, and other team activities are more accurately recorded in virtual team environments. Managers can also supplement their evaluations with modified 360-degree performance evaluations—gathering peer and customer input electronically (Kirkman et al., 2002).

Conclusion

With the nature of the workforce in constant flux, virtual teams are poised to become an increasingly utilized organizational tool to meet changing business conditions and needs. These teams have many benefits when compared to traditional, face-to-face teams, but the primary focus and scope of this paper has been on the tremendous challenge businesses face when attempting to monitor and evaluate virtual teams. The decreased availability of physical performance monitoring, potential lack of managerial understanding and awareness of virtual team processes, employee equity and organizational justice issues, and a likely overemphasis on the output when evaluating virtual teams are just a few of many challenges the research literature puts forth.

Nonetheless, this literature also provides organizations and virtual team managers with the strategies to implement and potential obstacles to watch for that aid in handling the aforementioned challenges. By creating a balanced scorecard with objective measures, increasing the flow of virtual team information, and capitalizing on alternative sources of information when assessing team and individual performance, managers have the means by which to combat the challenges raised in this paper.

Regardless of the nature of the economy or a business' specific environment, firms can utilize virtual teams to efficiently and effectively meet larger organizational goals and objectives. Therefore, it is important for human resource practitioners to have a firm understanding of the challenges and benefits of virtual teams, especially in monitoring and evaluating performance, in order to help the firm realize these greater goals

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Rafaeli, S. & Ravid, G. (2003). Information sharing as enabler for the virtual team: an experimental approach to assessing the role of electronic mail in disintermediation. *Information Systems Journal*, 13.

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Cascio, W.F. (1998). The virtual workplace: a reality now. *Society for Industrial & Organizational Psychology*, 35(4).

Abstract: Consider the new paradigm of work—anytime, anywhere, in real space or in cyberspace. For many employers the virtual workplace, in which employees operate remotely from each other and from managers, is a reality now, and all indications are that it will become even more prevalent in the future. In and of itself, this represents a dramatic change in how we work, and it presents new challenges for our profession. The challenges stem from the physical separation of workers and managers wrought by such information-age arrangements as telecommuting and virtual teams. The article provides background on virtual teams, as well as the challenges managers of these teams might encounter.

Cascio, W.F. (2000). Managing a virtual workplace. *Academy of management executive*, 14: 81-90.

Abstract: Virtual workplaces, in which employees operate remotely from each other and from managers, are a reality, and will become even more common in the future. There are sound business reasons for establishing virtual workplaces, but their advantages may be offset by such factors as setup and maintenance costs, loss of cost efficiencies, cultural clashes, isolation, and lack of trust. Virtual teams and telework are examples of such arrangements, but they are not appropriate for all jobs, all employees, or all managers. To be most effective in these environments, managers need to do two things well: Shift from a focus on time to a focus on results; and recognize that virtual workplaces, instead of needing fewer managers, require better supervisory skills among existing managers. Taking these steps can lead to stunning improvements in productivity, profits, and customer service.

Davis, A., & Khazanchi, D. (2007). Does mutual knowledge affect virtual team performance? theoretical analysis and anecdotal evidence. *American Journal of Business*, 22(2), 57-65.

Abstract: This paper describes the concept of mutual knowledge and its potential impact on virtual team performance. Based on an analysis of extant literature, we argue that there is a gap in our understanding of what is known about mutual knowledge as it impacts team dynamics and virtual team performance. Supporting literature, anecdotes, and case studies are used to discuss the importance of mutual knowledge for virtual team performance and the research issues that need to be addressed in the future.

Dittrich, J.E., & Carrell, M.R. (1979) Organizational equity perceptions, employee job satisfaction, and departmental absence and turnover rates. *Organizational Behavior and Human Performance*, 24: 29-40.

Abstract: Employee job satisfaction and perceptions of equitable treatment have been the topics of a great amount of behavioral research. Several theorists have suggested that one or the other may be related to organizational behaviors of employees such as absence and/or turnover. This longitudinal study examines the association of the two constructs, and, in a field setting, compares them as separate variables relating to absence and turnover. Employee perceptions of equitable treatment were found to be stronger predictors of absence and turnover than were job satisfaction variables.

Jackson, P., Klobas, J., & Gharavi, H. (2006). Technologies of the self: virtual work and the inner panopticon. *Information Technology and People*, 19: 219-243.

Abstract: This paper seeks to develop insights into control, power, consent and commitment with virtual knowledge workers who are removed from the immediate sphere of influence of management and co-workers.

Kanawattanachai, P, & Yoo, Y. (2002). Dynamic nature of trust in virtual teams. *Journal of Strategic Information Systems*, 11: 187-213.

Abstract: The authors empirically examine the dynamic nature of trust and the differences between high- and low-performing virtual teams in the changing patterns in cognition- and affect-based trust over time (early, middle, and late stages of project). Using data from 36, four-person MBA student teams from six universities competing in a web-based business simulation game over an 8-week period, they found that both high- and low-performing teams started with similar levels of trust in both cognitive and affective dimensions. However, high-performing teams were better at developing and maintaining the trust level throughout the project life. Moreover, virtual teams relied more on a cognitive than an affective element of trust. These findings provide a preliminary step toward understanding the dynamic nature and relative importance of cognition- and affect-based trust over time.

Kerber, K.W., & Buono, A.F. (2004). Leadership challenges in global virtual teams: lessons from the field. *Advanced Management Journal*, 69(4), 4-10.

Abstract: A steadily growing number of managers find themselves leading project teams with members located literally around the world. Yet, in many instances, the budget doesn't allow the team to meet on a regular basis—if at all. Many of the managers the authors have spoken with in these situations note that while demands are high, team performance often falls short of expectations and, at times, the team seems to be spinning apart. These managers have numerous concerns from start-up issues to long-term performance: What is my role as a virtual team leader? How can you build high-quality relationships when people seldom, if ever, see each other in

person? How can I enhance the performance of my virtual team? How can virtual relationships be managed more effectively using the company's existing communication technologies? Is it possible to manage performance and ensure accountability at a distance? The paper looks at the challenges and strengths of virtual team implementation.

Kirkman, B.L., Rosen, B., Gibson, C.B., Tesluk, P.E., & McPherson, S.O. (2002). Five challenges to virtual team success: lessons from sabre, inc. *Academy of Management Executive*, 16(3), 67-69.

Abstract: Advances in communications and information technology create new opportunities for organizations to build and manage virtual teams. Such teams are composed of employees with unique skills, located at a distance from each other, who must collaborate to accomplish important organizational tasks. Based on a comprehensive set of interviews with a subset of team members, team leaders, general managers, and executives on 65 virtual teams at Sabre, Inc.—an innovative organization in the travel industry—the authors identify five challenges that organizations can expect to encounter in establishing, maintaining, and supporting virtual teams, e.g., building trust, cohesion, and team identity, and overcoming isolation among virtual team members. Both leaders and members of virtual teams face particular difficulties in selecting team members who have the balance of technical and interpersonal skills and abilities required to work virtually and in evaluating the performance of individuals and teams working in virtual space. Examination of Sabre's strategies for coping with each challenge should be instructive to other organizations using or considering virtual teams.

Kirkland, N.B., & Bailey, D.E. (1999). Telework: The advantages of working here, there anywhere, and anytime. *Organizational Dynamics*, 28(2), 53-68.

Abstract: There are four breaks from the traditional 9-to-5 routine of employees who share a work location and see each other on a daily basis known as telework. (1) Home-based telecommuting refers to employees who work at home on a regular basis and can be said to be telecommuters if the telecommunications link to the office is as simple as a telephone. (2) Satellite offices consist of employees who work both outside the home and away from the conventional work place in a location convenient to the employees and/or customers. (3) A neighborhood work center is the same as a satellite office except that this houses more than one company's employees. (4) Mobile workers are frequently on the road, using communications technology to work from home, from a car, from a plane, or from a hotel—communicating with the office as necessary from each location. Each of these offers challenges for companies and their managers but it also provides them with opportunities, which the paper examines.

Kirkland, N.B., & Egan, T.D. (1999). Telecommuting: justice and control in the virtual organization. *Organization Science*, 10(4), 500-513.

Abstract: The adoption of telecommuting raises concerns for both managers and employees: Remote supervision presents monitoring challenges, while physical isolation may impede the

employee's opportunity for, and involvement in, determining valued organizational outcomes (organizational justice). This study of 191 employees examined the relationships among telecommuting, organizational monitoring strategies, and organizational justice perceptions. Results suggest that monitoring strategies were more strongly associated with organizational justice perceptions than with telecommuting, and procedural and interactional justice perceptions related significantly to telecommuting. The authors provide implications, limitations, and ideas for future research.

Lipnack, J, & Stamps, J. (1999). Virtual teams: the new way to work. *Strategy and Leadership*, 27: 14-18

Abstract: In the Information Age, people no longer must be in the same location to work together. Interactive technologies have created virtual teams as people work across the boundaries of time, space, and organization. The factors that contribute to the success of these new teams are discussed. The basic principles that underlie the success of virtual teams are: 1. purpose, 2. people, and 3. links.

Potter, R.E., Balthazard, P.A., & Cooke, R.A. (2000). Virtual team interaction: assessment, consequences, and management. *Team Performance Management: an International Journal*, 6(7/8), 131-137.

Abstract: Virtual teams are typically made up of geographically dispersed experts, supported by computer-based communication technologies. Though increasingly popular this is still a relatively unstudied organizational form. Virtual team membership is typically based solely on needed expertise; the teams rarely have any history of interaction and their performance potential is unknown. Research shows that teams exhibit constructive, passive, and aggressive interaction styles, which have significant effects on the decisions the teams produce as well as the teams' satisfaction with those decisions. The authors present managerial tools for the assessment of conventional and virtual team interaction styles. They detail how the tools are used, and we also discuss how the styles manifest in each medium, and their effects. They also give suggestions to team managers on how to use the insights the tools provide to manage their virtual teams for optimal performance.

Rafaeli, S. & Ravid, G. (2003). Information sharing as enabler for the virtual team: an experimental approach to assessing the role of electronic mail in disintermediation. *Information Systems Journal*, 13.

Abstract: This paper is an attempt to document empirically the relations between information sharing accomplished via electronic mail and the performance of teams. The authors report on an experimental study of the role of electronic mail in the operation of supply chains. A variation of the well-known 'Beer Game' role-playing simulation game was computerized and implemented in an internet-based environment to study the information-sharing behavior of teams. A total of 76 teams of four players each competed to achieve best net team profit. Results of the simulation

game permit a detailed examination of email use in an organizational context. Findings indicate the expected significant correlation between email use to share information up the supply chain and net team profit. In other words, sharing information in the team has a positive impact on performance. The recorded behavior of managers in the online simulation indicates that team members use electronic mail successfully to attempt disintermediation of the supply chain. When information is shared online, teams perform significantly better.

Solomon, C.M. (2001). Managing virtual teams. *Workforce*, 80: 60-64.

Abstract: Virtual teams offer tremendous opportunities, and tribulations. Electronic communication allows companies to recruit talent without the restraints of location, and to offer more scheduling flexibility such as telecommuting and working at home offices. It also creates the potential for follow-the-sun, 24-hour workdays and the ability to maintain close contact with customers throughout the world. On the other hand, it is difficult to manage people who must work collaboratively and interactively but may not ever actually lay eyes on one another. The complexities and subtleties of dealing with widely different personalities, cultures, and languages make communication far more difficult among virtual team members. These new challenges require diverse management skills, such as the ability to engender trust and productivity among team members even when there is no direct supervision.

WorldatWork. (2009). *Telework Trendlines 2009*. Retrieved March 3, 2010, from http://www.workingfromanywhere.org/news/Trendlines_2009.pdf

Abstract: The proliferation of high-speed connectivity and the explosion of hand-held devices occurred during the early 2000s and have become a mainstream way of working for many employers and employees. Indeed, history may record that the technology required for productive remote working and the urgent need for remote working (due to high fuel prices) converged in 2008, but is there data to support this notion? WorldatWork analyzes longitudinal data by the Dieringer Research Group to assess current telework trends.

Wright, P.C., & Oldford, A. (1993). Telecommuting and employee effectiveness: career and managerial issues. *International Journal of Career Management*, 5(1), 4-9.

Abstract: Telecommuting takes the concept of decentralization to its furthest degree. Managerial careers change, in that facilitation and the ability to service employees become the essential skills. Results, rather than visible inputs and "time-in", become important. Similarly, employees can develop alternate, less stressful, more productive lifestyles, as they are freed from constant interruptions. In order to make the telecommuting process work, however, the organizations must install proper policies and procedures, while providing proper training to managers, telecommuters and non-telecommuters. Also, management must insist that some time is spent in the office and that communication remains open.

VIRTUAL TEAMS: WORK/LIFE CHALLENGES - KEEPING REMOTE EMPLOYEES ENGAGED

Kirsten Sundin, American Express Graduate Research Assistant for CAHRS

Remotely located employees are quickly becoming a norm in the modern workplace in response to evidence that telecommuters save on costs and produce more efficiently. There are many intangible benefits also felt with the increasing prevalence of remote employees. Telecommuters are more satisfied with their work/life balance and report lower rates of job burnout. Though there are also many well-identified setbacks remotely located managers and employees may face. Employers see the most success with telecommuting by first recruiting the people best fit to fill these remote roles. However, the process of developing remote employees is a process that requires constant monitoring. The purpose of this paper is to identify the best practices being used by companies to keep remote employees engaged while simultaneously avoiding burnout.

Telecommuting

As little research focuses solely on the relationship between whole virtual teams and the idea of engagement, this paper will focus on the closely related link between individual virtual team members and their feelings of engagement. Remotely located team members are more and more often a reality of workplace teams both globally and locally as telecommuting becomes a common answer to budgetary problems in a challenging economy and work/life balance issues that have long been a concern of Human Resource managers (Derven, 2007; Madsen, 2003). Estimates of cost savings begin at least at \$2,000 per employee (Hewitt, 2008) and range to IBM's estimation of \$100 million per year as a result of its 42% remotely located workforce (Mulki, Bardhi, Lassk, & Nanavaty-Dahl, 2009). In addition to a savings in the tangible costs associated with working remotely telecommuters do not use a workspace or amenities and create less commute-related pollution and for which companies and tax payers have traditionally incurred a financial burden (Flemming, 1991).

Remote employees generally report a high degree of satisfaction with telecommuting, including greater work/life flexibility. In addition, they report being able to more quickly master new technologies used in daily work (Golden, 2006). In general, remotely located employers report less absenteeism, turnover and effects of job burnout (Flemming, 1991). Estimates suggest that telecommuters can be 20% more productive than traditional employees (Schepp & Schepp, 1995).

In reaction to the vast returns a company and an employee can see, telecommuter work grew over 20% between 2005 and 2006. At least a quarter of the world's workforce (878 Million workers) is estimated to consist of mobile employees (Cisco, 2007). Responding to this rapid growth, companies are assessing whether telecommuting is a good idea for a wide variety of employees.

While the benefits and cost savings of telecommuting can be vast, there are also many well-identified drawbacks, including a deep feeling of isolation and long hours (Schepp & Schepp, 1995).

The purpose of this paper is to identify the best practices being used by companies to keep remote employees engaged while simultaneously avoiding burnout.

Managing

Core Competencies

When implementing telework, emphasis should be placed on recruiting the right people (Snell, 2009). Employees well-suited for telework have a strong balance between technical knowledge and social skills. They are adaptable, well organized, and flexible. Their psychological profile is characterized by low levels of neuroticism, resilience, extroversion, and self-confidence. Further, they are always open to new experiences and opportunities to socialize (Conlin, 2009) and are highly self-motivated (Cisco, 2007).

Despite their prevalence, a Blessing White survey of 898 executives found that 37% of managers found managing global teams very difficult (Newsline, 2006). Telecommuters require a very different style from managers. They require much more time than the traditional employee to produce a similar level of engagement (Cisco, 2007). However, many of the competencies needed by managers in virtual and local settings are very similar. For example, Whitford (2009) found that transformational and visionary leadership produced the same levels of engagement from local and distance employees.

Just as core competencies have been identified for telecommuters, businesses are focusing on the leadership qualities remote managers must possess to be successful. Managers must be organized. Often agendas for meetings and work planning become the basis for daily interaction. One manager at Pfizer Global Pharmaceuticals uses a “check-in process” to solicit a statement from his employees and assess daily where they stand in progress towards their goals and how they feel about their current projects (Derven, 2007).

Always Connected

But first and foremost managers must be effective communicators. The communication is different, to be sure, but new norms develop even with those not familiar with the technologies. They must be skilled at relationship building. Short but frequent contacts are required to keep remote employees abreast of daily happenings – effectively replacing the small interactions that would traditionally happen in the hallway or in the lunch room. Replicating these instances of informal learning is a major identified drawback of remote managers (Kerber, 2004). Distance leaders become responsible for communicating the company culture to remote employees (Derven, 2007).

Short, frequent communications with purpose help remote employees to feel connected and included (Janove, 2004). A manager should make a special point to acknowledge the contributions of remote employees. Informal feedback also becomes critical in engagement (Linkow, 2008). They must know that their work is being noticed and is critical to the group effort (Derven, 2007). Managers must make time for personal interaction, especially if it is done virtually, to compensate for the impersonal means of communication (Newsline, 2006). During these points of contact it is

important for managers to always make themselves available for contact from remote employees (Gerke, 2006). Without a strong connection to their manager, employees can feel isolated or develop closer connections with a frequent customers, which can lead them to lose their focus on the company's main goals and strategic objectives.

Assessment

In a virtual environment trust can be very hard to gain. Managers must keep their commitments to remote employees. Frequent rescheduling or lack of response to questions will very quickly create disengagement and distrust (Gerke, 2006).

Performance management is most effective when management and employees agree on how performance will be assessed and measured (Linkow, 2008). Managing via technology can become demanding, but when a remotely-located employee is clear on their manager's expectations and confident on how they will be assessed, teleworkers will fully enjoy the benefits telecommuting can offer (Cisco, 2007). Managers can facilitate the process by maintaining consistency in their communications and actions towards remote employees.

Trust

Unfortunately the virtual employment relationship produces less inherent trust than exists between a traditional manager and employee (Merriman, Schmidt, & Dunlap-Hinkler, 2007). Remote employees are most productive when allowed to self-manage. They thrive when trusted to perform their job well (Cisco, 2007). Trust goes hand-in-hand with greater decision-making responsibilities and greater autonomy can help foster creativity in remote employees (Derven, 2007). Though leaders sometimes find this the most difficult part of remote management. Software-enabled monitoring as detailed as real-time long-on/log-off systems exist and are available to managers who worry about security risks and the data that is being transferred outside of a company's intranet. However, enabling this type of control can lead to a temptation to "look over the shoulder" of remote employees. Research suggests that while some means of technical accountability may be good, this type of rigid structure is detrimental to employee motivation and productivity (Newline, 2007; HR Magazine, 2005; "PC remote control", 2007). Managers are challenged to find a balance between people and the task at hand - between the two extremes of micro managing and allowing too much distance (Derven, 2007).

Communication

Communication within the company as a whole, beyond just one's manager, is very important to keeping remote employees engaged.

Feeling Connected

Mentors can help keep a remote employee from falling into the psychological traps that can accompany working alone. Often employees who report low feelings of engagement experience little team support behind their contributions (Cisco, 2007).

Social networking has become a popular way for employees to feel more engaged with local employees. Internal social networks are used for building a sense of personal community between remote employees but can also offer a convenient tool in the way of professional knowledge information sharing. LinkedIn, Facebook, and even MySpace groups on the internet have also become popular ways for employees to connect with one another. Currently 65% of professionals report that they engage in social networking and 52% of companies report that their motivation in encouraging social networking is specifically to keep local and remote employees engaged. Internal blogs and Podcasting (especially from top leaders) have also become popular as a form of communicating the goals and expectations of upper management (Newsline, 2007, "65% of business professionals").

Means of Communication

It can be difficult to maintain a strong trust between company and telecommuter without frequent access to reliable communication. Companies must provide adequate connections to the "office" for remote employees to be a productive member of the virtual team (Linkow, 2008). Access to audio conference features, e-mail, and telephone are crucial, and communication over these tools must always be as seamless as possible. Virtual communication is impersonal by nature and can be easily misinterpreted, and there is large room for error in the interpretation of e-mail. The phone remains the most frequently used and effective communication tool for remote employees (Cisco, 2007).

Competencies of the Company

Managers are best able to interact with remote employees in a decentralized system. This improves the line manager's ability to manage (Snell, 2009) with the leeway to tailor communications and goals to the individual employee. The company culture must foster enough trust to allow employees to make autonomous decisions (Cisco, 2007). Empowered employees with the ability to manage their own careers will exhibit the highest levels of engagement (Snell, 2009).

Avoiding Burnout

While growth in virtual employment suggests that the benefits outweigh the costs, it is important to note one of the most frequent pitfalls of remote work: burnout (Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008). Burnout from local and remote employees is a serious issue. It can lead to extreme absenteeism, substance abuse, and stress-related health problems (Thomas, 2007).

Telecommuting is sometimes seen as a remedy for traditional employee job burnout. However, remote employees can develop burnout stress from entirely new sources. They report strong feeling of isolation from the company and co-workers. They feel they miss a team connection and their motivation can suffer as a result (Zhang, 2008). This stems from a lack of casual and personal conversations often experienced during breaks in the traditional office work day.

Some remote employees complain that they are promoted more slowly or passed over for advancement opportunities, or at least report that their work is not valued (Schepp & Schepp,

1995). Employees also frequently report difficulty in drawing clear boundaries between their work and personal life. Remote employees are often busy outside of normal 9-5 working hours due to issues with time-zones (Thomas, 2007). Some teleworkers report having a hard time drawing lines between family and work commitments when they are physically in the same place. Managers must focus on helping remote employees to set priorities and frequent breaks (Mulki et al., 2009).

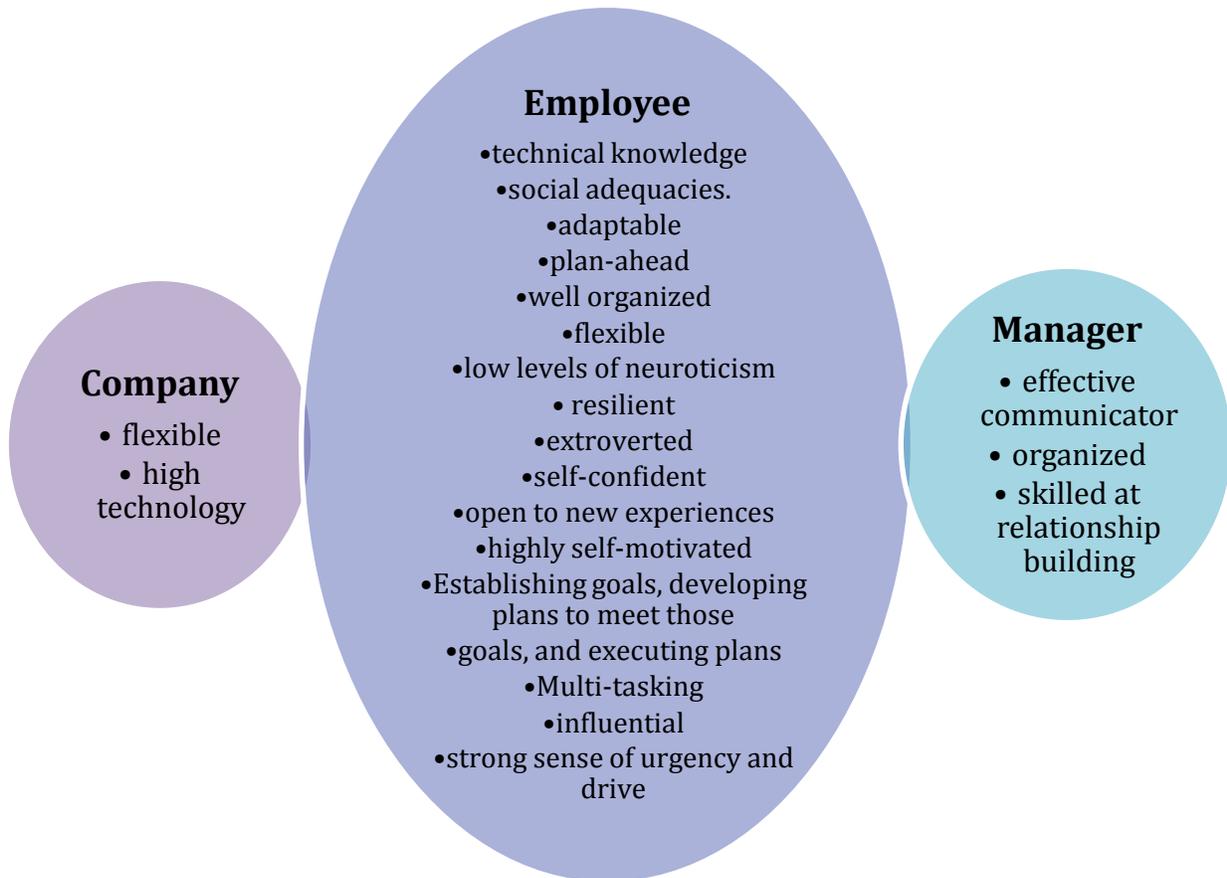
Recommendations

The difficulties remote employees face are serious. There is research supporting both the positive and negative effects telework can have on family/work conflict (Madsen, 2003) (Linkow, 2008). However, some management difficulties may stem from general teamwork, locally or virtually located (Gerke, 2006). Research also supports the idea that with active management many of these difficulties are easily avoided. The opportunities for very positive increases in productivity and job satisfaction can be realized through effective management (Cisco, 2007). Today, the most effective way to accomplish these goals is through constant, consistent communication and virtual networking. When a remote employee is in constant virtual connection with their team, they are more likely to be committed to the team's goals (Kerber, 2004). Remote employees are more committed to their own goals through interactive coaching from managers. Managers are also responsible for creating a virtual environment that replicates the informal professional development the company would provide (Kurland, 2002).

Telecommuting will continue to grow in its many forms. The key to benefitting fully from the advantages of the practice and avoiding burnout is to maintain employee engagement (Kurland, 2002). Personal communication and recognition of accomplished goals are of utmost importance (Whitford & Moss, 2009). With a constant stream of communication and information from a dedicated manager, remote employees can reach their maximum potential.

Table 1:

Core Competencies



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- 65% of business professional are logging on to social networking sites. (2007).
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Annotated Bibliography

65% of business professional are logging on to social networking sites. (2007). Newsline Article. Retrieved March 10, 2010 from the World at Work organization.

Abstract: The study revealed that employees are quickly gravitating toward leveraging social networks for very traditional business uses. About half (52%) of respondents whose organizations are using social networking sites do so to keep internal staff and remote employees connected, while 47% of total respondents use the networks to connect with potential clients and to showcase their skills. A total of 35% say they use networks to assist them in finding a job. But it's not all about connecting in the conventional sense. Networks are also being leveraged to raise the IQ of organizations. Over half (55%) of those using the networks do so to share best practices with colleagues, and 49% use them to get answers to issues they are currently facing. This is an area that experts think could help social networking really take off inside corporations.

Cisco. (2007). Understanding and Managing the Mobile Workforce.

Abstract: Is mobile working the way we will all work in the future? Is it transforming the business world, driving innovation and creating opportunities – or confusing managers, draining organisational resources and wrecking family life? This report examines the challenges faced by mobile workers and the organisations that employ them. It draws on a wide range of sources, including a specially commissioned series of in-depth interviews with mobile workers and their managers from organisations around the world. It reveals several surprising facts about what it takes to be a mobile worker – and how organisations can maximise the value they get from the people they empower with mobility. Today's typical mobile worker is a full-time, male manager. But within two years, one quarter of the world's working population will be mobile workers. This means that organisations will have to manage a rapid transition to a style of working that supports people of all kinds, makes the best of their talents and maintains their identification with the organisation and its goals. Successful mobile workers tend to be resilient extroverts. They are open to new experiences and highly adaptable. And, contrary to the stereotype of the harassed and disoriented road warrior, they are supremely organized and independent-minded. With the right kind of tailored support, their productivity and adaptability make them superlative operators in an era of increasing demands and constant change. But they also need help in maintaining their work-life balance, and keeping their all-important self-confidence. Organisations clearly need to equip their mobile workers with more than just technology: they also need to supply attention, recognition, empathy and a constant sense of inclusion.

Conlin, M. (2009, July). Is there a virtual worker personality? *BusinessWeek Online*. Retrieved March 10, 2010 from the Business Source Complete database.

Abstract: The article reports on the findings of studies related to the personalities of virtual workers. It states that some employees are simply not suited to digital working by temperament, psychology, or personality. In a study conducted on Cisco Systems Inc.'s mobile workers, it was found that employees who chase socialization also do well in virtual work as they stay connected no matter where they are. The study also said that mobile workers are more organized than their office-bound counterparts.

Considering More Offsite Work? Manage Virtual Employment. (2008). [Electronic Version] *HR Focus*, 85 (10), 9.

Abstract: The article highlights virtual employment as a means to leverage talent yet enhance employee engagement and productivity. It mentions the audio conference "Virtual Employment: Leveraging Talent & Avoiding Risks of the Off-Site Employee" presented by Geoffrey Dubiski, chief talent scout at Sumner Grace & Associates.

Derven, M. (2007). The remote connection: Leading others from a distance requires set expectations, trust, and unique methods of evaluation. [Electronic Version] *HR Magazine*, 52(3), 111-115.

Abstract: The article focuses on remote leadership and personnel management. Remote leaders are becoming common in relation to increased globalization, mergers and acquisitions and a desire to save costs on commercial real estate. Leaders who treat remote employees as valuable assets will be rewarded with higher performance and productivity. Tips on addressing the challenges associated with remote leadership are presented.

Flemming, L. (1991, October). Computer commuting is catching on. [Electronic Version] *USA Today*, 8.

Abstract: In California, state regulations encourage telecommuting to reduce traffic and resulting pollution. Elsewhere, many states are looking to telecommuting to help meet the requirements of the Clean Air Act. Bell Atlantic is among several major corporations, including IBM, American Express, Pacific Bell, and Kodak, that have turned to telecommuting as a creative alternative to absenteeism, job burnout, and low productivity. Eric Legstrom, Bell Atlantic director of strategic planning, finds his twice-weekly telecommute a good way to break the humdrum effect of working every day.

Flexible Work Grows as a Work/Life Solution. (2004). [Electronic Version]. *HRFocus*, 17.

Abstract: Flexible work options are about more than "flex time"-they include part-time schedules, job-sharing, and telecommuting, and they are becoming more popular among employees and employers. The HRfocus Flexible Work Options Survey found that interest among workers for flexible options is stable or growing. Much of this depends on how widespread the offerings are or

how many employees use them at a particular organization, as well as management's willingness to provide and support the options. (To see the most current popular flex options among survey respondents, see the sidebar, "What Flexible Work Options Do You Offer?") A structured program seems to be the key ingredient to the success of flexible work options, survey respondents agree. Setting and enforcing parameters ensure that everyone knows what is expected of them.

From the Leadership: Executive Committee. (2008). Workspan Article. Retrieved March 5, 2010 from the World at Work organization online.

Abstract: The renovation has forced everyone out of their comfort zones and made them (and me) walk the talk about the workplace of the future. Managers once reluctant to have remote employees are discovering that it is possible for team members to be “intellectually present” even when you can’t see them. Co-workers have learned what I call “the rules of remote etiquette.”

Gerke, S. K. (2006). If I cannot see them, how can I lead them? *Industrial and Commercial Training*, 38(2), 102-105.

Abstract: Purpose — The purpose of this paper is to provide leaders with a clear understanding of some key issues they face when leading remote workers and to provide practical suggestions on *how* to deal with those issues. Design/methodology/approach — The main method of research for this paper is data from participants in workshops over a ten-year period. Participants included all levels of management, as well as non-managers in a variety of large organizations across industries. Industries include high-tech, food, consumer products, energy entertainment and manufacturing. Participants included those with global teams, teams within a country and teams with work-at-home members. Findings — The key finding is that remote leadership requires the same good management and leadership skills that co-located leadership requires. However, in the remote environment, leaders must be more deliberate and planful about building relationships and trust and in communicating. Practical implications — Leaders *can* implement specific techniques, several of which are presented in the paper to increase their effectiveness of leading remote employees and teams. Originality/value — While remote leaders often struggle as they try to work effectively with their employees, they do not often identify that it is specifically the remote factor that is causing much of the challenge. This paper provides practical techniques for anyone trying to get work accomplished with remote employees.

Golden, T.D. (2006) Avoiding depletion in virtual work: telework and the intervening impact of work exhaustion on commitment and turnover intentions. *Journal of Vocational Behavior* .Vol. 69 (1), 176.

Abstract: Despite the tremendous growth of telework and other forms of virtual work, little is known about its impact on organizational commitment and turnover intentions, nor the mechanisms through which telework operates. Drawing upon the conservation of resources model

as the theoretical framework, I posit telework's impact is the result of resource stockpiling and flexibility as teleworkers are able to yield work and personal benefits and protect themselves from resource depletion in the office. Using a sample of 393 professional-level teleworkers in one organization, I therefore investigate the intervening role of work exhaustion in determining commitment and turnover intentions. Results indicate that telework is positively related to commitment and negatively related to turnover intentions, such that a higher degree of teleworking is associated with more commitment to the organization and weakened turnover intentions. Moreover, work exhaustion is found to mediate the relationships between teleworking and both commitment and turnover intentions.

Hewitt. (2008). Trends in HR and employee benefits: Employers' try to ease workers' commuting pain. Retrieved April 19, 2010 from Hewitt Associates online.

Abstract: According to several recent news articles, a growing number of companies have undertaken a variety of initiatives to ease the commuting burden for employees. This bulletin touches briefly on recent news on this topic.

Hunsaker, P. L., & Hunsaker, J. S. (2008). Virtual teams: A leader's guide. *Team Performance Management*, 14(1), 86-101.

Abstract: Purpose - The purpose of this article is to provide guidelines to help leaders understand and lead virtual teams. Design/methodology/approach - This paper discusses the importance and implementation of effective leadership for virtual teams. It begins with a review of conventional versus virtual teams, and then describes the two primary leadership functions in virtual teams - performance management and team development. Following the discussion of the development and function of new teams, the article then provides a detailed guide for the leadership of virtual teams over the life of a project. These guidelines follow the four stages of a project timeline: Pre-Project, Project Initiation, Midstream, and Wrap-Up. Practical implications - Following guidelines and understanding the differences between conventional and virtual leadership will enable managers to become effective virtual team leaders. Originality/value - The paper shows how, in the context of increasing globalization and technology, leaders can manage the challenges of leading virtual teams.

Janove, J. W. (2004). Management by remote control. [Electronic Version] *HR Magazine*, 49 (4), 119-124.

Abstract: Ensuring that your employees consistently meet expectations of performance, attendance and workplace conduct is never easy. However, when separated geographically from your employees by hundreds or even thousands of miles, the degree of management difficulty soars. Beginning with hypothetical experiences of ABC Inc., headquartered in Richmond, Va. (all

taken from actual situations), this article explores what managers can do to meet the challenges of supervising employees in distant

Kurland, N. B., & Cooper, C. D. (2002). Manager control and employee isolation in telecommuting environments. *Journal of High Technology Management Research*, 13(1), 107-126.

Abstract: This article focuses the effective management of a team where the members are scattered across the globe. A case study of a virtual team found that leaders can take some steps to counter the forces tending to fragment the team and undermine its effectiveness. These include making sure the team is working on issues its members find personally compelling; jointly defining and committing the team to an identity, goals and processes; managing performance with a process that recognizes the team members' routines and daily work; creating a lavish information flow; and binding the process with the leader's unmistakable commitment.

Kerber, K. W., & Buono, A. F. (2004). Leadership challenges in global virtual teams: Lessons from the field. *SAM Advanced Management Journal*, 69(4), 4-10.

Abstract: This study examines the challenges related to telecommuting, focusing on how managerial monitoring strategies (behavior, output, clan) link to telecommuters' professional isolation concerns. The study relies on interviews with supervisors, telecommuters, and nontelecommuters. Findings suggest that the primary challenges facing supervisors who manage in telecommuting environments involve clan strategies: fostering synergy, replicating informal learning, creating opportunities for interpersonal networking, and professionally developing out-of-sight employees. These challenges affect telecommuters' professional development opportunities, which in turn heighten their perceived professional isolation.

Linkow, P. R. (2008). Meeting the challenges of a dispersed workforce: Managing across language, culture, time, and location. Retrieved March 12, 2010 from The Conference Board.

Abstract: The Conference Board established the Research Working Group on Managing 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.

Madsen, S.R. (2003). Work and family conflict can: Can home based teleworking make a difference? *Human Resource Development Quarterly*, 14 (1), p35-58.

Abstract: A key issue in HRD is to identify and determine factors that influence the performance of employees and organizations. Two possible factors are the initiation of teleworking and the reduction of work-family conflict. The purpose of this survey questionnaire study was to investigate the differences in work-family conflict between full-time worksite employees and full-time employees (individuals who worked from home at least two days per week). Two hundred and twenty-one usable surveys were returned from full-time teleworkers and nonteleworkers in seven corporate organizations. The findings indicate that teleworkers had lower levels of various dimensions of work-family conflict. Relationships were also found between work-family conflict and gender, health, number of hours worked, and number of children.

Merriman, K. K., Schmidt, S. M., & Dunlap-Hinkler, D. (2007). Profiling virtual employees: The impact of managing virtually. *Journal of Leadership & Organizational Studies*, 14(1), 6-15.

Abstract: Leaders in the age of virtual work require an understanding of how this affects their employees' relations with management. From a survey of employees working in a variety of virtual and conventional settings, an empirical profile of employee-manager relationships was completed using a multidimensional measure of virtual status. The profile identified distinct virtual characteristics for two types of virtual employment relationships—free agents and regular core employees who work virtually—and contrasting characteristics for conventional employment relationships. Further analysis of the identified groups suggests that trust in one's manager and perceived managerial support differ across types of employment relationships. Specifically, the findings indicate lower levels of trust and support within virtual as compared to conventional relationships, and lower levels of trust within free-agent versus regular- employee virtual relationships.

Mulki, J., Bardhi, F., Lassk, F., & Nanavaty-Dahl, J. (2009). Set up remote workers to thrive. *MIT Sloan Management Review*, 51(1), 63-69.

Abstract: During the last decade, virtual work -- professionals working remotely from home, from client locations or simply from the road -- has become increasingly prevalent. Some Fortune 500 companies, including Procter & Gamble, IBM, Accenture and AT&T, have already partially or fully eliminated traditional offices. As much as 10% of today's work

force telecommutes from home -- more than triple the level of 2000. This trend will accelerate in the coming decades in response to the ongoing globalization of work, ever-increasing customer demands and the cost and time of commuting. However, remote employees as well as managers are becoming increasingly aware of the challenges associated with virtual work as they relate to internal communication, social interaction and employee satisfaction and commitment. The article focuses on four critical challenges involving remote work that require management attention: (1) finding the right work-life balance, (2) overcoming workplace isolation, (3) compensating for the lack of face-to-face communication and (4) compensating for the lack of visibility.

New technology allows companies to monitor employees' whereabouts to improve productivity. (2005). *HRMagazine*. 50 (7), 99.

Abstract: The WiFi Watchdog system can be deployed in private sectors as a way to track external and internal wireless users' authorized and unauthorized use of a company's wireless networks. It identifies rogue users by location and time of use. It prevents outside intruders from penetrating a company's wireless network as well as legitimate inside users from unwittingly associating with neighboring wireless networks. In the next couple of years, experts say, more-accurate tracking of wireless users' locations, whether inside a building or outside, will become the norm.

PC Remote Control Increases Mobile Workforce Productivity. (2007). *Newsline Article*. Retrieved March 5, 2010 from the World at Work organization online.

Abstract: In many cases, allowing employees to work from home has proven productive: It lowers company expenses, and allows employees to more easily achieve a balance between their business and personal lives.

Richman, A., Noble, K., & Johnson, A. (2001) *When the workplace is many places*.

Abstract: Though it is still common to envision a corporate office building or factory as the place where we "go to work," every day a large proportion of the labor force works "off-site" in another kind of environment— perhaps a room in their home, an airport lounge, or a customer's office. These off-site workers are a major and apparently growing component of the workforce. To determine the prevalence and profile of off-site work, the American Business Collaboration (ABC) funded this study as part of its goal of providing leadership on leading-edge issues for a changing workforce. The primary objective was to obtain information that would enable ABC companies and the corporate community at large to manage off-site workers and a dispersed workforce more effectively. The findings discussed here are based on a nationally representative sample of 2057 adults who are either full-time employees of companies with 500 or more employees, or family members of employees. The study presents a 360° perspective, incorporating the views of off-site and on-site workers, their coworkers, managers, and family members.

Rosen, P.B.; Ekelman, F.B., & Lubbe, E.J. (2000). Managing Expatriate Employees: Employment Law Issues and Answers. *Journal of Employment Discrimination Law*, 2(2), 110.

Abstract: The article focuses on the management of expatriate employees. Over 100,000 United States companies are engaged in global business ventures valued at more than one trillion dollars. These companies employ almost seven million people outside the United States. As the world becomes more economically politically and culturally linked, the labor-management relationship is more dynamic and the legal issues more complex. American companies operating in the world marketplace must be knowledgeable about these challenges, including the cultural, economic and political challenges that confront employers; effects increased global competition and technology have on the workforce; managing a diverse workforce and avoiding the liability that often results from diversity in the workplace; managing acculturating and negotiating contracts with expatriates; applicability of federal workplace laws to American citizens employed abroad by American companies or "American controlled" companies. The American workforce is embarking upon an uncertain journey into the 21st century due to the rapid globalization of the marketplace.

Schepp, D & Schepp, B. (1995). The telecommuter's handbook: How to earn a living without going to the office. New York: McGraw-Hill.

Abstract: Telecommuting today; Telecommuting's Advantages: The Upside; Telecommuting's Disadvantages: The Downside; How To Become A Telecommuter; The Best 50 Jobs for Telecommuting; ; 100 Companies With Telecommuters; Resources For Telecommuters.

Snell, A. (2009). Tackling the challenges of employee engagement. *Strategic HR Review*, 8 (2), 37-38.

Abstract: Engaged employees go beyond the confines of their job description, conscious of how their roles drive the business towards its objectives. The strongest driver in achieving this is a sense of feeling valued and involved. However, achieving high levels of employee engagement is becoming increasingly challenging. Indeed, as organizations globalize and become further dependent on technology and virtual working environments increase, so do the issues associated with engagement. Greater emphasis is put on connecting and engaging with a dispersed workforce. Despite the threat that technology brings, the following are examples of how it can be used by organizations, along with talent management processes, to improve employee engagement: 1. Recruit and onboard the right people. 2. Proactively drive internal mobility. 3. Improve the line manager's ability to manage. 4. Empower employees to manage their own careers.

Telework trendlines for 2006. (2007). Retrieved March 11, 2010 from http://www.workingfromanywhere.org/news/Trendlines_2006.pdf

Abstract: The following report includes data from the Telework Module of the “2006 American Interactive Consumer Survey,” a random digit dialed (RDD) telephone survey conducted Oct. 17 through Nov. 5, 2006 by The Dieringer Research Group, Inc. The telecommuting questions in the “2006 American Interactive Consumer Survey” are commissioned by WorldatWork through a special arrangement with The Dieringer Research Group. One thousand and one telephone interviews were conducted with adults 19 years and older in the United States using computer generated random digit telephone lists. The data were weighted to match current population norms for U.S. adults 18 years and older, using four weighting factors: age, gender, educational attainment and U.S. Census region. Data for all U.S. adults in the survey (n=1,001) is considered reliable at the 95 percent confidence interval to within +/- 3.1 percent. The primary goal of the larger “2006 American Interactive Consumer Survey” is to generate representative population projections for selected segments of both online and offline U.S. adults 18 years and older.

Thomas, D. (2007, March). How to: avoid burnout. *Caterer & Hotelkeeper*, 197 (44), 8.

Abstract: Being constantly overworked and under pressure is likely to lead to a state of emotional exhaustion, or burnout, with deadly effects on your career. However, there are precautions you can take to prevent burnout. What are the danger signs? Typical symptoms include: tiredness, loss of productivity, cynicism, high rates of absenteeism, interpersonal conflict, substance abuse, and deterioration in mental or physical wellbeing. Prolonged and intense levels of stress are usually seen as a precursor to burnout.

Van den Broeck, A., Vansteenkiste, M., De Witte, H., & Lens, W. (2008). Explaining the relationships between job characteristics, burnout and engagement: The role of basic psychological need satisfaction. *Work & Stress*, 22 (3), 277-294.

Abstract: Within the Job Demands-Resources model, the presence of job demands (e.g., work pressure) and the absence of job resources (e.g., social support) relate to burnout through a psychological energetic process, whereas the presence of job resources associates with work engagement through a motivational process. Although various mechanisms have been suggested to understand these processes, empirical evidence for these mechanisms is scarce within the JD-R framework. This study examines the role of basic need satisfaction, as defined within Self-Determination Theory, in the relationships between job demands, job resources, and employees' exhaustion and vigour, the main components of burnout and engagement, respectively. Structural equation modelling in a heterogeneous sample of 745 employees of the Dutch-speaking part of Belgium confirmed that satisfaction of basic psychological needs partially explained the relationships from job demands to exhaustion and from job resources to vigour. It fully accounted for the relationship between job resources and exhaustion. We conclude that the current study adds to the research pointing at need satisfaction as a promising underlying mechanism for employees' thriving at work.

Virtual Teams are Routine, but Now Managers Need New Skills. (2006). *Newsline Article*. Retrieved March 5, 2010 from the World at Work organization online.

Abstract: What hinders effective management of remote employees, Rice observed, is a lack of daily face-to-face interaction which makes it easy for employees to lose touch. "Team leaders and members alike have to cope with time shifts and extra-long days. Misunderstandings are common and may erode the trust base. Virtual teams need careful nurturing of trusting relationships, as they tend to suffer without informal opportunities to socialize."

Whitford, T; Moss, S. (2009). Transformational Leadership in Distributed work Groups: The Moderating Role of Follower Regulatory Focus and goal Orientation. *Communication Research*. 36(6), 810-837.

Abstract: This study addressed the question of whether the benefits of transformational leadership extend to virtual environments. Furthermore, whether regulatory focus or goal orientation moderate the extent to which these benefits apply to virtual environments was also explored. A total of 165 employees completed a survey that assessed the leadership style of their supervisors as well their own regulatory focus, goal orientation, work engagement, and job satisfaction. When followers and leaders worked at different locations, visionary leadership was positively related to work attitudes, provided that promotion focus was sufficiently high or prevention focus was sufficiently low. Furthermore, when followers and leaders worked in the same location, personal recognition was positively associated with work engagement, especially if prevention focus or performance goal orientation was high. These findings align with the proposition, derived from construal level theory that leadership advice and support in which only the essence needs to be extracted apply to virtual environments.

ABOUT THE CENTER FOR ADVANCED HUMAN RESOURCE STUDIES (CAHRS)

The Cornell Center for Advanced Human Resource Studies (CAHRS) is the world's leading partnership between industry and academia, devoted to global human resource management. CAHRS partners represent more than 60 of the world's premier companies. The CAHRS partnership provides the connection between these leading companies, Cornell University, the ILR School, and leading faculty, students and intellectual leaders throughout the world. The CAHRS relationship offers the opportunity to work directly with key faculty and students, to participate in, influence, and be the first to learn about new research findings and applications. CAHRS provides partners with unique opportunities to participate in university classes and executive education, exploit the world-class resources of the Catherwood Library, and sustain their leading edge through unique interactions with the network of CAHRS partners. CAHRS partners are especially visible and influential with students and faculty at Cornell and the ILR School, which is consistently ranked as the top source of international human resource talent in the world.

ABOUT THE AUTHORS

Rebecca Heller, MILR 2011

Rebecca is in her second semester of the MILR program, and is concentrating in Human Resources and Organizations. She graduated Summa Cum Laude from the State University of New York at Geneseo in 2009 with a B.A. degree in Psychology. Prior to coming to Cornell University, she interned for Wegmans Food Markets in a Staffing role. This summer, Rebecca will begin a summer internship with the Pepsi Beverages Company. This is Rebecca's second semester as a CAHRS research assistant.

Aaron Laurito, MILR 2010

Aaron Laurito is a second year Master of Industrial and Labor Relations candidate with a concentration in Human Resources & Organizations. He graduated Magna Cum Laude from George Washington University with a degree in Spanish Language & Literature and a Music minor. Upon graduation, Aaron moved to New York City and worked for two years as an ESL teacher and volunteer manager at a non-traditional high school. Since coming to Cornell, Aaron has served as the Marketing VP for SHRLOE (Strategic HR, Leadership, & Organizational Effectiveness) group on campus in 2009 and as a CAHRS Research Assistant. He spent last summer working on projects related to international staffing assignments with Cisco Systems and will be joining Deloitte Consulting in Ottawa, Canada beginning this summer.

Kurt Johnson, MILR 2010

Kurt Johnson is a second year M.I.L.R. candidate concentrating in Human Resources & Organizations, with an expected graduation date of May 2010. He completed his undergraduate education at Brigham Young University, focusing in International Business and Marketing at the Marriott School of Management. After receiving his BA, he joined the Beijing United Family Hospital and Clinics in Beijing China where he worked in HR and eventually led the department's international accreditation efforts. He then spent two years leading HR for LanguageCalls Ltd, a start-up offering one-to-one language coaching via the internet. Kurt interned with Sun Microsystems last summer and will be joining Citigroup full-time later this year. Kurt has been married for 7 years and has 2 children with a 3rd on the way.

Maureen Martin, MILR 2010

Maureen Martin is in her final semester of the MILR program in the School of Industrial and Labor Relations. Maureen also received her B.S. degree from the School of Industrial and Labor Relations in 2006. Upon graduation, Maureen worked as an HR Representative for Tyco International. Before returning to Cornell, Maureen worked as the International Business & Economics Program Assistant for the Danish Institute for Study Abroad in Copenhagen, Denmark. Maureen is currently looking for a full-time position following graduation this May. This is Maureen's first semester as a CAHRS research assistant.

Rex Fitzpatrick, MILR 2010

Rex Fitzpatrick is a second year master's student in the Industrial and Labor Relations program concentrating in Human Resources and Organizations, and is expected to graduate in May 2010. In 2008 he received his BS from the University of Illinois at Urbana-Champaign in psychology. Prior to coming to Cornell, Rex interned at the John G. Shedd Aquarium in Chicago in their human resources department creating a formal on-boarding program and increasing their diversity network. This past summer he had the opportunity to intern as a diversity program associate for Microsoft's diversity recruitment team. Upon graduating from the MILR program, Rex plans on returning to Seattle to work for Microsoft full-time in their HR Trax rotational program, starting as a project manager for the company's Compensation, Benefits, and Performance Management function. This semester will be Rex's third as a full-time CAHRS research assistant.

Kirsten Sundin, MILR 2011

Kirsten is completing her second of four semester towards a masters degree from the school of Industrial Labor Relations here at Cornell University. In May 2009, she graduated from West Virginia University with a B.A. in Psychology. She has been working with CAHRS since August 2009 as a Research Assistant; a position generously funded by Kevin Cox, Executive VP, Human Resources of American Express. She has two years of HR-specific work experience and hopes to continue working in corporate HR beginning with an upcoming summer internship with Shell.