Team Performance Management

Emerald Article: Building trust and collaboration in a virtual team
Judith A. Holton

Article information:

For Authors:
If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service. Information about how to choose which publication to write for and submission guidelines are available for all. Additional help for authors is available for Emerald subscribers. Please visit www.emeraldinsight.com/authors for more information.

About Emerald   www.emeraldinsight.com
With over forty years' experience, Emerald Group Publishing is a leading independent publisher of global research with impact in business, society, public policy and education. In total, Emerald publishes over 275 journals and more than 130 book series, as well as an extensive range of online products and services. Emerald is both COUNTER 3 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

*Related content and download information correct at time of download.

Building trust and collaboration in a virtual team

Judith A. Holton

The author

Judith A. Holton is Executive Consultant, Office of Planning, Development and Research, Human and Corporate Services, Holland College, Charlottetown, Prince Edward Island, Canada.
E-mail: jholton@hollandc.pe.ca

Keywords

Teams, Team building, Work organization

Abstract

Organizations are increasing their reliance on virtual relationships in structuring operations for a global environment. Like all teams, virtual teams require a solid foundation of mutual trust and collaboration, if they are to function effectively. Identifying and applying appropriate team building strategies for a virtual environment will not only enhance organizational effectiveness but will also impact positively on the quality of working life for virtual team members.

Electronic access

The research register for this journal is available at
http://www.mcbup.com/research_registers

The current issue and full text archive of this journal is available at
http://www.emerald-library.com/ft

Introduction

With the acceleration of communications technology, we now find ourselves living and working in an increasingly global virtual environment. Organizational development professionals are beginning to consider how virtual communications technology will influence the way in which we work together – whether it will enhance or hinder organizational effectiveness. Virtual team work is a subject of increasing interest (Belbin, 1981; 1993; Geber, 1995; Grenier and Metes, 1995; Hutchins, 1996; Kostner, 1994; Townsend *et al.*, 1996). The need to understand better and purposefully design technology supported systems for organizational communications and "community building" is an area deserving further study.

The challenge to team building in a virtual environment is that of creating avenues and opportunities for team members to have the level and depth of dialogue necessary to create a shared future. Particularly important is the need to ensure that adequate time is devoted to strategies and systems for generative conversations as well as creating shared meaning and a commitment to a culture of collaboration. Experimenting with a variety of team building techniques designed to promote the development of deep dialogue may provide the groundwork for assessing the application of these techniques to the unique dynamics of virtual teams, where issues of cultural diversity, geographic distance and member isolation can increase the challenges to effective collaboration.

The ability to work collaboratively is recognized as a core competency of a learning organization. It is trust, however, which truly denotes the collaborative dynamic of a learning organization (Handy, 1995a). Trust develops through frequent and meaningful interaction, where individuals learn to feel comfortable and open in sharing their individual insights and concerns, where ideas and assumptions can be challenged without fear or risk of repercussion and where diversity of opinion is valued over commonality or compliance. Caring talk, personal conversations and story telling are forms of discourse which can establish a mood of support and encourage self-disclosure and the sharing of feelings. These can also enhance group trust and make other,

more critical kinds of conversation possible (Comstock and Fox, 1995).

Encouraging shared interests, common values and mutually satisfying solutions are essential to leveraging the potential of knowledge workers (Quinn *et al.,* 1996). Collaborative learning, as the basis for effective organizational team building, requires a level of personal familiarity, intimacy and trust, allowing team members to listen to one another with respect and understanding (Comstock and Fox, 1995). For most newly forming teams, achieving this level of personal interaction is not an easy or a natural state. We are socialized to reduce conflict, frequently through compliance or compromise. When working in teams, however, it is through the respectful encouragement and consideration of diversity that we achieve creativity and innovation or "breakthrough thinking". Once a team learns to recognize, respect and use its diversity, it can truly expect to achieve the optimum interdependence characteristic of a high performance team.

Establishing trust is fundamental to the successful formation and growth of any new work team (Glacel, 1997; Awe, 1997; Senge *et al.,* 1994). Increasingly, researchers are recognizing the importance of assessing not only a team's technical skills but also its competency in such areas as team building, group dynamics, conflict resolution and group communications skills (Cianni and Wnuck, 1997). The importance of humour, ritual and ceremony in bonding group members is also well documented (Bennis, 1997; Bolman and Deal, 1991). In a virtual team, where many of the traditional ways in which humans establish bonds through physical contact and socializing are absent or at best limited, the importance of building trust assumes pivotal importance (Handy, 1995a; 1995b). Sophisticated communications technology can enhance the ability of teams to collaborate but will not substitute for team maturity (Cianni and Wnuck, 1997). The ideal situation would therefore seem to be that in which an established and well performing team adds virtuality to its operational dynamic. Increasingly, however, virtual teams will form without the advantage of prior face-to-face team building opportunities but with the added challenges of geographic isolation, time zone differentials and cultural diversity. Such diversity within a team, however, appears to have the potential to increase opportunities to be innovative, creative and stimulating, if trust can be established within the membership (Dyer, 1995). Research indicates as well that there may be benefits in terms of a diverse group's ability to generate decision-making alternatives and to cooperate, once the group has been together for a while (Milliken and Martins, 1996). Ensuring, therefore, that teams are encouraged to spend sufficient time and are supported in their efforts to establish high levels of interaction and trust may very well determine the future success of the virtual organization.

The attention paid to both the importance and the complexity of effective team building gives some indication of its central role in strategic organizational development over the past decade (Belbin, 1981; 1993; Katzenbach and Smith, 1993; Scholtes, 1991; Schrage, 1990; 1995; Senge *et al.*, 1994). Developing the ability to effectively collaborate becomes critical, as we continue to move toward a global, knowledge-based economy. The power base in the information age is indeed the ability to organize, create and distribute information to others. As such, knowledge work productivity is directly related to effective interpersonal relations including how people feel about each other, on what they focus attention, the methods they use to make decisions and the expectations they set for themselves (Pasmore and Purser, 1993). The consequences of virtual work are, therefore, by-products of social designs rather than technology alone (Kling and Jewett, 1995). How one creates trust within a team of individuals working across distance, time zones, cultures and professional disciplines is a challenge that an increasing number of organizational leaders will face. The selection and effective utilization of communications tools designed to initiate and develop meaningful dialogue among virtual team members is the critical first step in opening team members to that level of genuine conversation, or deep dialogue, essential to building trust and effective collaboration (Senge *et al.*, 1994).

Dialogue plays a key role in facilitating collaborative learning and transforming mental models within a group (Schein, 1995). It is social learning at its best (Comstock and Fox, 1995). Deep dialogue becomes a vehicle for creating "sacred space" through

conversation (Gerard and Teurfs, 1996). Language gains its meaning within organized forms of social interaction (Gergen and Thatchenkery, 1996). Collaboration is born in the ability of a group to dialogue with sufficient depth and opportunity to establish trust and open communication (Dyer, 1995; Nevis *et al.*, 1996; Schein, 1994; Senge *et al.*, 1994).

Bohm's idea of dialogue as a process for creating harmony and community suggests a pervasive incoherence in the process of human thought as the essential cause of endless crises affecting humankind. Individual and collective presuppositions, ideas, beliefs and feelings subtly control our interactions and create a dissonance in our efforts to communicate our thoughts and feelings to others (Bohm *et al.*, 1991). We view this dissonance not as diversity but as disagreement: not as a source of creativity but as a source of conflict. We move rapidly to resolve conflict, not through dialogue but through discussion with the goal of achieving agreement, generally through compliance or compromise. To do so, we instinctively seek commonality as our starting-point rather than diversity and, in so doing, we reduce our opportunities to see new solutions emerge as a result of the shared meaning created through deep dialogue. Bohm's work went well beyond the concept of creating effective teams. However, his idea of the importance of creating a space and time for meaningful dialogue is central to the development of trust and true collaboration within any team. It is through deep dialogue that we can learn to suspend our assumptions and judgments, actively and attentively engage in listening to others and reflect individually and collectively upon the ideas and thoughts that emerge. Bohm's work has been a major influence on current organizational development literature (Gerard and Teurfs, 1996; Hale, 1995; Senge *et al.*, 1994; Wheatley, 1994).

There is considerable difference of opinion in terms of the ability of virtual teams to function effectively without face-to-face interaction (Geber, 1995; Levinson and Asahi, 1995). Research comparing groups using computer-based communications with those using face-to-face interaction indicates that the former take longer to reach consensus, participate more equally, show higher choice shift and display more uninhibited verbal behaviour (Kling and Jewett, 1995). There is agreement, however, about the need for training specific to the needs of virtual teams including virtual interaction, anonymous environments and collaborative empowerment (Townsend *et al.*, 1996). Research is beginning to identify specific competencies for the global virtual work environment including cross-cultural communication, process facilitation, creating and sustaining remote team work and managing information technology (Hutchins, 1996). Other research is beginning to recognize the significance of interpersonal style, or more specifically social intelligence, on level of comfort and adaptability to working virtually (Dilenschneider, 1997). Personality type may also contribute to success in a virtual environment. Introverts, who prefer to process information internally and to express themselves in writing, may be especially adept in the virtual world (Geber, 1995).

Study method and conduct

This research project was intended to test the applicability of some standard team building tools to the unique needs and environment of a virtual team. The six-member virtual team participating in this research project provides staff support to a regional, not-for-profit health promotion organization. Staff are geographically dispersed. Opportunities to meet face-to-face are infrequent. Teleconference and e-mail are the standard media for team work.

The selected research methodology was that of participatory action research with both inductive and deductive approaches to inquiry. The action research cycle of planning, execution, observation and reflection fits well with a typical organizational life cycle, where new processes are established, tried, monitored and fine-tuned or rejected in favour of more appropriate or productive processes. Reflective feedback, both individual and collaborative, played an integral role in the design and conduct of this research project, engaging participants in a series of specific team building interventions and collaboratively assessing each intervention by collecting and analyzing reflective feedback. This qualitative approach was intended to foster rich detail and reflection around the

project's central themes of deep dialogue, trust and collaboration.

Three team building interventions were selected as the focus for this research project. The interventions selected were the Team Fitness Test (Bendaly, 1997), the online Keirsey Temperament Sorter (Keirsey, 1984) and the Modified Belbin Group Role Questionnaire (MacIver and Associates, 1995). Tools selected for collecting qualitative data were personal journals, team dialogues through teleconferencing and computer, or Web-based, conferencing.

The project took place over a period of seven weeks. All interactions among the participants and researcher were conducted through virtual media. The process was intended to assist the team in assessing its current level of "team fitness" and in stimulating the development of conversations focused on creating "shared meaning". Through such conversations, it was anticipated that team members might begin to identify and appreciate the diversity of experiences, abilities and interests that they individually and collectively bring into the virtual team environment. It was anticipated as well that they might identify ways to utilize their diversity in exploring and building understanding and mutual trust within the group, thus enhancing their collaborative potential.

Bendaly Team Fitness Test

Bendaly's Team Fitness Test is a concise but effective tool through which a team can assess its strength in each of five critical team fitness elements – shared leadership, group work skills, climate, cohesiveness, and change compatibility. It enables a team to identify its strengths as well as areas for development. It also enables individual team members to compare their perception of the team with the general team view.

Using individual score sheets from team members, a team composite score of the fitness test was developed. Personal electronic reports of the team fitness test results were then distributed to each team member. The electronic reports showed their personal scores and ranking of team strength in each of Bendaly's five key indicators of team fitness compared with the team composite score. These were e-mailed to team members along with a brief introduction to Bendaly's work. All team members ranked "climate" as a

strong element in their team, giving maximum ranking to the following statements: "Our team welcomes new ideas", "There is a feeling of openness and trust in our team", "Team members feel free to give their honest opinions" and "Team members respect each other". The need to strengthen "cohesiveness" was the element identified by all team members as requiring the most attention within their team.

The consensus of the team in the follow-up teleconference dialogue was that they are essentially a good team with the potential and motivation to become even better. They agreed that they needed to work at "fine-tuning" how they actually work together, to clarify their focus as a team and to set priorities for their work together. They also recognized that, as they had been working together for only a short time, they had perhaps not had the time to develop fully as a team. The different needs, approaches, commitments and priorities of individual team members were also cited as an important consideration in team planning and setting of expectations, given their potential impact upon the ability and willingness of individual team members to participate. The need to be realistic in setting team goals was emphasized, so that all members of the team can meet the expectations of fellow members and avoid raising feelings of guilt or frustration within the team. It was suggested that the real challenge in working virtually is that of structure and time available to the team to do its work. Thus, developing skills in virtual time management, networking, collaboration and team building in a compressed time frame is essential to enhancing team effectiveness.

The teleconference dialogue identified three needs important to the continued development of the team:

(1) the need to spend time together, sharing individual concerns, needs, competing commitments and reaching agreement on team priorities;
(2) the need to develop a communications protocol to foster regularity and reliability in team communications; and
(3) the need to ensure that all important group roles are recognized, respected and covered off within the team.

One team member suggested that the team establish some type of ritual that would focus

attention on its development; for example, a regular virtual coffee break or happy hour. It was agreed that doing something like this every two or three weeks might also help the team to streamline its current volume of e-mail communications, while also meeting the expressed need of some team members for more "human contact" within the group. The teleconference ended with some team members commenting on how exciting it was to be participating in this process, as it was giving them an opportunity to clarify their goals as a team as well as to learn about who they were as a team of individuals. Comment was also offered about the potential impact of their virtual teamwork on their working with others. Modeling collaborative behaviour within the team could become a natural way of working with others. Investing time to develop their richness as a team could enable them to appreciate and develop richness in the wider organizational community.

As a researcher, I particularly noted the general tone of the dialogue in this first teleconference. Characterized by frequent affirming responses as well as humor and genuine engagement of the participants, this "caring talk" reflected the positive climate that this team had ranked as its greatest strength. Caring talk is, as well, a foundational piece in the social infrastructure necessary for building online collaboration (Comstock and Fox, 1995).

Online Keirsey Temperament Sorter
The Keirsey Temperament Sorter was selected as an appropriate intervention for enabling a team to share information about themselves, their individual strengths and their preferences (Keirsey, 1984). Based on Jung's theory of personality types, it is an affirmative, non-judgmental personal assessment emphasizing the value of diversity and providing a non-threatening forum in which individual team members can share and discuss their personal and work style preferences. As it can be completed online, it is especially conducive to working with a virtual team.

This team had an interesting concentration of "type". All six members were typed as "Es" – three ENFJs, one ENTJ, one ENFP and one ESFJ. My first observation was that this team could present an interesting challenge to the premise that virtual communication was a preference of introverts rather than extroverts.

Did their preference for extroversion create some of the frustration they were expressing around how to work virtually? Did this account for their expressed desire for "more human interaction"? If so, could they learn to use their extroversion in a virtual environment?

During the team's second teleconference the overall reaction to the online Keirsey was very positive. The general agreement was that the Keirsey was certainly amenable to the virtual environment. Not only could it be administered and automatically scored online but it was as well a simple and enjoyable testing instrument. The team saw its strong preference for extroversion as correlating with the high ranking it had given to positive team climate through the Bendaly Team Fitness Test intervention. As extroverts, they enjoy a similar type of climate, involving a high level of personal interaction, and work to foster this environment within the team. The observation was made that their strong preferences for intuition (N) and feeling (F) might also foster a high level of understanding and a tolerance for similar styles of interaction and behaviour within the team. It was suggested as well that a high intuitive type within the team might also have a positive correlation with enhancing virtual communication.

After discussing some of the potential strengths of their composite type description, the team turned to considering its possible deficits. The first observation was that so much similarity might mean that the team was "lop-sided" in its membership type. Also noted was the imbalance between judging (J) and perceiving (P) within the team and the concern that this might cause the team to move too quickly to closure on issues and plans of action without ensuring that it had adequately considered all options or perspectives. Closely related to this was, as well, the need for more sensing (S) and thinking (T) type behaviour within the team. The team agreed that making an effort to enhance its perceiving, sensing and thinking styles would add valuable balance, particularly in the process of reaching consensus and agreement to act. By working to develop its perceiving style, the team might be more inclined to consider a number of possibilities prior to bringing issues to closure. Developing its sensing style could assist the team in evaluating the practicality of ideas

and alternatives for action. Enhancing its thinking style could assist the team in logically considering and analyzing alternative courses of action.

It was interesting, at this point, to observe individual team members inviting feedback from their colleagues about their own type and the impact that it might be having on the team's operations. This exchange was particularly significant for its openness and honesty and for its respect and affirmation of the value of type diversity in contributing to the overall work of the team. Following from this was the suggestion that the team begin to action some of the learning that it was experiencing. One very practical outcome was suggested to encourage the development of the team's perceiving and judging styles. A team member suggested that, before coming to closure on any issue or decision, team members would agree to set aside a "healthy amount of time" for dialogue (perceiving style) but also to set a specific time for closure on each issue or decision (judging style). In this way, she suggested, the team could use its perceiving style to bring out ideas and suggestions, while assuring the judging types within the team that a definite time had been set for reaching closure and action on the issue at hand. She added another interesting comment. She suggested that this process would work well, if it were based on "a level of trust within the team". As a researcher looking for signs of enhanced trust within a virtual team, I found myself asking whether seeing a team begin to talk openly about trust might be the first indication of an enhanced level of intra-group trust. Did the open dialogue suggest awareness of and a level of comfort with the issue of trust within the team? Was this the first step to building a deeper level of trust within the team?

Modified Belbin Group Role Questionnaire

Based on the pioneering work of Belbin (1981; 1993) in team role theory and application, the Modified Belbin Group Role Questionnaire has been adapted to provide a quick assessment tool, through which individuals can self-identify their preferred styles or roles within a group. By sharing this information, a team can ascertain whether it has within its membership all of the roles identified as essential to effective group work. It was selected for this project specifically

because it fosters an opportunity for a good dialogue around the many important roles within a group and the need to achieve a balance around these roles to reach peak performance.

Belbin, a UK academic and consultant in organizational development, is generally regarded as the father of team role theory (Belbin, 1981; 1993). Belbin's research has identified nine team roles – the action-oriented roles of:
(1) shaper;
(2) implementer;
(3) completer/finisher

the people-oriented roles of:
(4) co-ordinator;
(5) team worker;
(6) resource investigator

and the cerebral roles of:
(7) creative "plant" or ideas person;
(8) monitor/evaluator; and
(9) specialist.

According to Belbin's team role theory, each person has one or two of these roles to which they are ideally suited, a number of other roles which they can assume, if there are no others to take these roles in a team, and some roles that will be best avoided. Belbin's work focuses on the importance of identifying individual "natural" preferences for specific team roles, then playing to these individual strengths, while, at the same time, balancing the team by ensuring that all of the required roles are covered off. The real advantage to doing this work, according to Belbin, is that smaller teams are then able to do more in less time – a thought that definitely appealed to this virtual team. Collateral benefits include the potential for identifying hidden talents within a team, as individuals deliberately assume new roles, enhanced self-esteem for team members, as they see their skills contributing to overall team success, and reduced conflict through greater recognition and understanding of the different team roles.

MacIver's Modified Belbin Group Role Questionnaire reflects what he sees as a slightly different combination of team or group roles as being typical of the North American organizational environment. He identifies the following nine group roles:
(1) realizer;
(2) co-ordinator;
(3) shaper;

(4) creator;
(5) resourcer;
(6) evaluator;
(7) team worker;
(8) finisher; and
(9) emoter.

Like Belbin's self-perception inventory, MacIver's questionnaire is a simple tool for enabling each team member to self-assess his/her preferred roles within group settings and those which he/she could assume if needed to balance the group.

An electronic version of the Modified Belbin Group Role Questionnaire was distributed to all team members. Individual group role profiles were then returned to team members along with a composite picture of the team's distribution of the nine group roles. Most roles were fairly well covered off within the team; however, three team roles did require some attention. The composite showed the team having a high natural preference for the roles of emoter (EMO) and realizer (REA). The team's deficiencies were in the roles of evaluator (EVAL), with no one showing a natural preference for this role; as well as shaper (SH) and finisher (FI) with only one team member showing a natural preference for each role. It was suggested that the team's composite description might indicate that the team is very good at generating ideas and plans for pursuing their ideas. However, the team may need to spend more time in the critical evaluation of ideas generated before they are approved for implementation as well as in finishing off projects to ensure that details are adequately considered and addressed. It should be recognized, as well, that, to achieve the desired balance of group roles within the team, some members would need to assume new and non-preferred roles.

In our follow-up teleconference dialogue, we addressed the challenge of assuming new roles and the discipline that would be required by all team members to adopt assigned roles rather than reverting to those they naturally prefer. It was suggested that one way to reinforce the necessary role assignments might be to begin each team meeting by having each team member declare the role(s) she has been assigned. The team could then take the time at the end of each meeting to review their process and ensure that all roles had been adequately covered in

the team's dialogue and decision making. Assigning specific roles within the team to ensure that all nine required roles are represented and then staying with these assigned roles could over time enable the team to develop a synergy in their work together. With conscious effort this could become a natural, high performance style of operation for the team as a whole.

This teleconference also generated a dialogue about how much team members were enjoying the virtual team building process and the opportunity it was providing for them to reflect on who they are as individuals. Some team members also indicated that they were finding useful applications for this learning beyond the team. They indicated that they were consciously working on improving team process and also trying to temper their behaviour in those styles or preferences where they may be a bit too strong for good team interaction. There was as well comment about the process helping them to get a picture of their fellow team members despite the fact that they had actually had very little time working together. Team members also shared that they were starting to see the impact of the process in their team activities; becoming aware of and using "the dynamics" in their work together.

A short conversation followed on the drawbacks to e-mail as a form of communication; in particular, the opportunity for miscommunication and misunderstanding, when one must rely solely on the written word. The fact that so many people treat e-mail as a quick and casual medium for communication can compound the problem, if care is not taken in the choice of words and the tone conveyed by the construction of the communication. One team member described e-mail as "compressing our interactions", causing us to respond too quickly to messages received and to risk not taking important time to reflect or to carefully craft messages. What is so often lost is the important subtleties and the richness of human interaction. It was suggested that one of the reasons we may rush with e-mail is that many of us receive more messages than we can comfortably handle. This results in feelings of "drowning" in e-mail and the need therefore to "deal" with these messages as quickly and expediently as possible; thus, we respond without adequate

reflection. Learning to discipline ourselves to acknowledge receipt of e-mail but to reserve responding until we have taken the time to reflect and compose our thoughts is a challenge in terms of virtual time management. However, it may be well worth the effort if we can reduce the chances for miscommunication and the unfortunate misunderstandings that result. Such misunderstandings inevitably entail further e-mails, telecommunications or even face-to-face meetings to repair the damage from the initial casual or careless communication.

Conferencing on the Web

It was decided at this point to introduce the team to a new virtual communications tool – Web-based conferencing. It was suggested that this asynchronous tool might provide the appropriate environment for creating the kind of considered reflection and deep dialogue that they were clearly sensing was difficult to achieve through e-mail alone. It was also suggested that Web conferencing could actually be used as a virtual decision-making tool. By structuring their interactions into separate dialogues for each issue that they needed to address, they could then agree to a set time frame for generating virtual dialogue and reaching decisions. Team members could contribute their ideas, questions, reflections and recommendations asynchronously according to their personal schedules – a definite advantage over teleconferencing, where frequently one or more team members' contributions can be lost, if they are unable to participate at a scheduled time. Having a written record of all contributions generated through Web dialogue is an added benefit over teleconferencing.

To initiate the conference, I set up three topic areas:
(1) welcome;
(2) personal journals; and
(3) virtual coffee break.

Postings were slow to appear, however, and the intended dialoguing was limited as a result. It appeared that the team was having some difficulty integrating a new communications technology into their established pattern of virtual interaction; this despite their earlier concerns regarding the limitations of existing communications. In our subsequent teleconference, there was a lively interaction

about the challenges and the excitement of exploring a new virtual environment. The reaction to Web conferencing was positive, although everyone indicated that they still felt awkward using it and that they recognized that it would take some time for it to become a regular part of their virtual communications pattern. One team member suggested that the real value to a structured asynchronous tool was the opportunity to build some "congruence" into the team's process for dealing with issues of strategic importance – those issues that really require dialogue and reflection before decisions are made. The written record of the dialogue and reflections could serve an important archival role for the organization as well.

Comment was then made on the "tone" of the journals posted on the Web conference compared with those that had been submitted directly earlier in the research project. The observation was that the journals posted in the conference were more inhibited than the earlier journals. It was questioned whether knowing that their fellow team members would be reading their conference postings may have affected how comfortable team members were in sharing their reflections. One team member readily acknowledged that she had found herself editing her comments as she posted them for this reason. It was noted that this certainly points up the importance of developing trust within the team, if team members are to feel comfortable in sharing their thoughts and feelings openly.

A very practical concern was raised about the impact of adding extra virtual communications tools to the team's operations. One team member expressed frustration with having to search in three different places – e-mail, voice mail and now Web conferencing – for team messages. Her fear was twofold – the time required to do this and the potential for fragmentation in communications. The need for the team to develop a communications protocol was now clearly recognized.

Our teleconference dialogue then moved into a review and assessment of the project's impact overall upon the team. Comments were offered about the project having been helpful in getting the team to focus on both the process and the technical issues around virtual communications. It was recognized that the team now had to do something concrete with the learning it had achieved through this process, if long-term benefits were to accrue.

Setting to work on a communications protocol for the team was seen as an excellent first step. It was also suggested that the project had been helpful in creating an awareness of the different personalities and styles within the team and the impact of these differences upon their working together. Again, the point was stressed that the team now had to do something concrete with this knowledge to ensure that the learning remained as a legacy for the team and would not be lost with the project's closure. It was suggested that web conferencing could be used to facilitate this further development work by serving as a place for some of the deeper exploration of team development issues. What was readily agreed was that time was the scarce resource for this team and that it will be imperative for the team to make a strong commitment to devoting a portion of this precious resource to this work, if it is to continue to develop as a virtual team.

I then asked team members to consider, based on their own experience, whether virtual teams can be effective without face-to-face meetings. One team member expressed her belief that the ideal would always be a combination of interactions – face-to-face as well as virtual. She emphasized her strong belief that face-to-face interaction is important in building the trust necessary to be able to operate as a virtual team. Another team member suggested that perhaps more time spent in a process like this might reduce the need for face-to-face meetings. She admitted that this was hard to assess, as there had not been enough time for this particular team, but that she did feel that it was possible. Another team member suggested that virtual teams need to build in sufficient time to create a real process of meaningful interaction that goes beyond the use of virtual media as mere tools for transmitting information back and forth. One team member expressed the view that, although it may well be possible for virtual teams to function without face-to-face interaction, it was not what she wanted in her work life. Face-to-face interaction is, for her, an important aspect of her work.

Research results

The quality of the research outcomes was most certainly enhanced by the candid feedback received throughout the process. The team was pragmatic in its approach.

Members recognized that, as self-employed consultants and community development professionals, they were increasingly working in a virtual world and that the opportunity to develop their virtual teaming skills could have significant transferability to other current and future work opportunities. As such, they were recognizing virtual teaming as an essential competency for a future in which one's success rests not in what one can produce alone but in what one can do in collaboration with others.

That is not to say that individual team members did not express ambivalence about the trend to a virtual work world and the effectiveness of the virtual environment for organizing and conducting complex decision making and task execution. Such concerns reflect the socio-technical nature of virtual team work (Kling and Jewett, 1995). Individual team members also expressed ambivalence about the need for face-to-face interaction in building an effective virtual team. Despite the technological capability for purely virtual team work, some team members were forthright in declaring a desire and need for the emotional connection and the immediacy of the face-to-face environment. However, there was some recognition that, although perhaps not preferable, it is possible to achieve a level of effective and satisfying team interaction in a virtual environment.

It was sensed that as we progressed through the process, the team was increasingly more comfortable with the nature of deep dialogue, with exploring the impact of personality type on group dynamics and the importance of diversity and a balance of roles within a team. Did the efforts made to foster deep dialogue among the team members have any noticeable impact upon their interactions or the perceived level of trust within the group? The team's final journal entries can provide some insight into the opinions of individual team members in this regard:

> ... my relationship with each of the women is one where I feel comfortable communicating from the heart. Even on the telephone calls, I feel completely comfortable. It is a completely different feeling from what I have on other teleconference calls, where I am quite nervous when I speak.
>
> I now understand myself and others better and it really has helped a great deal. Understanding leads to trust.

We "let down our guard" (at least to a certain extent) in opening up about our strengths and weaknesses as a team. I'm not sure if any other process would have encouraged us to be this open at this stage of working together. At least for the more private types among us. Being willing to do this allowed me a wider understanding of our team and of the areas I could personally work on to improve the team's work and my own.

... it really has created an awareness for me of how important trust is and that you have to work at it. I have not been as fluent or involved in the dialogue to date but have now realized that it is important, if you are going to get to know me better and if I am to be a useful member of the team. I am hoping that our understanding and trust will grow and that we will reach out to each other when we need to.

I wish there had been more time during the telephone debriefings. I found those particularly helpful and left me with lots to think about after we hung up ... you did a great job getting us on the line and talking together about things we certainly wouldn't have on our own.

As this last comment illustrates, the greatest frustration and challenge facing this virtual team were those of limited time. Even in a virtual environment, where the opportunity for asynchronous interaction can "stretch" and enhance the flexibility of limited time, all team members identified the challenges of limited availability for communication, considered reflection and competing priorities, both professional and personal. This is perhaps one of the most perplexing paradoxes of virtual work. The same technologies that enable us to work together irrespective of geography and time zones also enable our work to "invade" our personal lives and space. Unless carefully managed, the boundaries between office and home, work and family, duties and pleasure can quickly disappear. For each of us, this can represent a different context. What one may find integrating another will find intrusive. The important personal challenge here is finding the balance that suits one's individual needs.

Finally, when asked to comment on the positive and negative aspects of virtual teaming from their own experience, the team felt that the advantages of being able to work virtually did outweigh the drawbacks:

For me the benefits are primarily having control over my physical environment and, to a lesser extent, control over my schedule. (That sure doesn't always happen, though.) It's also great having the opportunity to work with people from all over the region, without stepping out the door. The drawbacks are the fact that we really do work in such isolation from one another so much of the time, and I miss the side-bar connections that happen in a regular office setting ... it's hard for us to really know the reality of one another's existences so it's hard to know at times what expectations to have of everyone else. (Or even ourselves).

The ability to work together across distance on projects ... Being able to work with people you choose to work with. Being able to work from home which can be anywhere. Wasting less time on fruitless communications and focusing energy on fruitful exchange. No office politics.

Of course it is an efficient and cost-effective way of working together, if everyone is clear about the processes and roles and how to really make it work. It is an incredibly flexible way of working and networking and I in particular like the fact that it means that you can connect with more people, which is not always possible under the old ways of working.

Conclusion

From the experiences of the team in this research project, it is felt that one can conclude that standard team building tools can be used to enhance collaboration and trust in a virtual team. As with all team building, there is no quick fix for virtual teams. Factors contributing to virtual team development include positive team climate, opportunity for regular team communications, action learning and personal growth of team members through structured team building interventions to create shared understanding and mutual trust. By continuing to focus attention and time on virtual team building, it is quite possible that a team will experience enhanced collaboration and cohesiveness. Competing priorities, both individual and organizational, as well as the very real constraints of time and resources are the greatest threats to a team's continued development. The impact of these limitations can be personal frustration for individual team members and a lack of progress toward team and organizational goals.

Attention to process is the critical factor in addressing these limits to team growth. Through the continuing process of deep dialogue, a team can address its limitations and strive to achieve the balance necessary to assure future vitality. Through deep dialogue, a team can continue to cultivate a culture and a set of shared values conducive to virtual teaming. Additional team process issues can

assist in shaping and managing the team's growth and development. These include achieving consensus on a shared vision, mission, goals and outcomes; developing and implementing a virtual communications protocol and assessing team fitness on a regular basis to identify areas of success and areas for further development.

Regardless of technological advances in virtual communications, change in the way we work together is a process not an event. As such, it will take time and will require each of us to adapt to new environments, new technologies and new ways of working. A wise virtual team leader will recognize this and use a variety of processes and techniques to enhance team development over time. As this research project demonstrates, standard team building tools can be an excellent place to start the process. These and other techniques can be borrowed from the face-to-face environment and adapted to virtual work. As we continue to construct our virtual future, new tools will no doubt be developed specifically for the virtual team environment.

As social beings, face-to-face interaction will continue to play a very important role in our work relationships regardless of how virtual our environment may become. As such, a wise virtual team leader will also seek to build opportunities for face-to-face meetings into virtual team work whenever possible as a means of enhancing team understanding and accelerating intra-group bonding. Certainly, a wise leader will always employ a face-to-face meeting to resolve a serious team crisis or conflict, even if this face-to-face opportunity must, by necessity of geography, employ a virtual medium like videoconferencing.

References

Awe, S. (1997), "Trust in the balance: building successful organizations on results, integrity, and concern", *Library Journal*, Vol. 122 No. 9, p. 84.
Belbin, R.M. (1981), *Management Teams: Why They Succeed or Fail*, Butterworth-Heinemann, Oxford.
Belbin, R.M. (1993), *Team Roles at Work*, Butterworth-Heinemann, Oxford.
Bendaly, L. (1997), *Strength in Numbers: Easy Steps to High Performance Teams*, McGraw-Hill Ryerson, Toronto.
Bennis, W. (1997), *Organizing Genius: The Secrets of Creative Collaboration*, Addison-Wesley, Reading, MA.
Bohm, D., Factor, D. and Garrett, P. (1991), "Dialogue – a proposal", URL: http://www.muc.de/~heuvel/dialogue/dialogue_proposal.html
Bolman, L.G. and Deal, T.E. (1991), *Reframing Organizations: Artistry, Choice and Leadership*, Jossey-Bass, San Francisco, CA.
Cianni, M. and Wnuck, D. (1997), "Individual growth and team enhancement: moving toward a new model of career development", *The Academy of Management Executive*, Vol. 11 No. 1, pp. 105-16.
Comstock, D. and Fox, S. (1995), "Computer conferencing in a learning community: opportunities and obstacles", URL: http://www.seattleantioch.edu/VirtualAntioch/compconf.htm
Dilenschneider, R.L. (1997), "Social intelligence", *Executive Excellence*, Vol. 14 No. 3, p. 8.
Dyer, W.G. (1995), *Team Building: Current Issues and New Alternatives*, 3rd ed., Addison-Wesley, Reading, MA.
Geber, B. (1995), "Virtual teams", *Training*, Vol. 32 No. 4, pp. 36-41.
Gerard, G. and Teurfs, L. (1996), "Dialogue and organizational transformation", URL: http://www.vision-nest.com/cbw/Dialogue.html
Gergen, K.J. and Thatchenkery, T.J. (1996), "Organization science as social construction: postmodern potentials", *Journal of Applied Behavioral Science*, Vol. 32 No. 4, pp. 356-75.
Glacel, B.P. (1997), "Teamwork's top ten lead to quality", *The Journal for Quality and Participation*, Vol. 20 No. 1, pp. 12-17.
Grenier, R. and Metes, G. (1995), *Going Virtual: Moving Your Organization into the 21st Century*, Prentice-Hall, Upper Saddle River, NJ.
Hale, J. (1995), "The theory and practice of dialogue in organizational settings", URL: http://www.workteams.unt.edu/reports/jphale.htm
Handy, C. (1995a), "Managing the dream", in Chawla and Renesch (Eds), *Learning Organizations: Developing Cultures for Tomorrow's Workplace*, Productivity Press, Portland, OR.
Handy, C. (1995b), "Trust and the virtual organization", *Harvard Business Review*, May-June, pp. 2-8.
Hutchins, R. (1996), "Globalwork: bridging distance, culture and time", *Human Resources Development Quarterly*, Vol. 7 No. 3, pp. 97-031.
Katzenbach, J. and Smith, D. (1993), *The Wisdom of Teams: Creating the High Performance Organization*, Harvard University Press, Cambridge, MA.
Keirsey, D. (1984), "The Keirsey Temperament Sorter", URL: http://www.keirsey.com/cgi-bin/keirsey/newkts.cgi
Kling, R. and Jewett, T. (1995), "The social design of worklife with computers and networks: an open natural systems perspective", URL: http://www.ics.uci.edu/~kling/worknt.html
Kostner, J. (1994), *Virtual Leadership: Secrets from the Round Table for the Multi-site Manager*, Warner Books, New York, NY.
Levinson, N.S. and Asahi, M. (1995), "Cross-national alliances and interorganizational learning", *Organizational Dynamics*, Vol. 24 No. 2, pp. 50-62.
MacIver, K.A. and Associates (1995), *The Modified Belbin Group Role Questionnaire*, Vancouver.

Milliken, F.J. and Martins, L.L. (1996), "Searching for common threads: understanding the multiple effects of diversity in organizational groups", *Academy of Management Review*, Vol. 21 No. 2, pp. 402-34.

Nevis, E.C., Dibella, A.J. and Gould, J.M. (1996), "Understanding organizations as learning systems", URL: http://learning.mit.edu/res/wp/learning_sys.html

Pasmore, W.A. and Purser, R.E. (1993), "Designing work systems for knowledge workers", *Journal for Quality and Participation*, Vol. 16 No. 4, pp. 78-87.

Quinn, J.B., Anderson, P. and Finkelstein, S. (1996), "Managing professional intellect: making the most of the best", *Harvard Business Review*, March-April, pp. 71-80.

Schein, E.H. (1994), "Organizational and managerial culture as a facilitator or inhibitor of organizational learning", URL: http://learning.mit.edu/res/wp/10004.html

Schein, E.H. (1995), "Building the learning consortium", URL: http://learning.mit.edu/res/wp/10005.html

Scholtes, P.R. (1991), *The Team Handbook: How to Use Teams to Improve Quality*, Joiner, Madison, WI.

Schrage, M. (1990), *Shared Minds: The New Technologies of Collaboration*, Random House, New York, NY.

Schrage, M. (1995), *No More Teams! Mastering the Dynamics of Creative Collaboration*, Doubleday, New York, NY.

Senge, P., Kleiner, A., Roberts, C., Ross, R.B. and Smith, B.J. (1994), *The Fifth Discipline Fieldbook: Strategies and Tools for Building a Learning Organization*, Doubleday, New York, NY.

Townsend, A.M., DeMarie, S.M. and Hendrickson, A.R. (1996), "Are you ready for virtual teams?", *HR Magazine*, Vol. 41 No. 9, pp. 122-7.

Wheatley, M.J. (1994), *Leadership and the New Science; Learning about Organization from an Orderly Universe*, Berrett-Koehler, San Francisco, CA.