Fostering Trust in Virtual Teams

*Designing collaborative spaces that encourage successful communication practices*

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**Introduction**

The reality of today’s workplace is radically different than it has been in the past. Instead of cubicles, water coolers, and happy hours, the modern workplace is now more likely to consist of virtual offices, video conferencing and once-a-year company retreats.

It has been predicted that by the year 2005, 30% of the American workforce will be working remotely, connected only virtually to their organizations. (Coates 1997) The fundamental corporate concept of ‘the team’ is transforming into an extraordinary new 21st-century version: the *virtual team*. But is it just another fleeting business buzzword?

Many experts would disagree; the increasing use of internet, intranet, and groupware have made many organizations begin to rely significantly on virtual teams, because of their ability to effectively reach across time, space, and organizational boundaries. However, the development of virtual teams is still in its infancy. Even though their role in the workplace is yet to be fully discovered, one thing is certain—they are changing the way we communicate at work.

Teaming, of course, is not a new concept. Studies of teamwork and collaboration in the workplace are abundant. A unifying theme in these studies is the importance of trust for building high-performing teams. “Teams with higher levels of trust coalesce more easily, organize their work more quickly, and manage themselves better.” (Lipnack and Stamps 1996) Communication is one of the foundations of trust.

One of the main reasons for the failure of virtual teams is due to the difficulties involved in building trusting relationships *virtually*. Electronic communication channels present unique challenges for team bonding, group management, and task work. Since virtual teams often have limited life spans, trust is established (or, in many cases, diminished) fairly quickly, rendering initial communications between group members crucial.

It is our goal to provide you, the learning designer, with core design principles for creating collaborative spaces that will help groups adopt the successful communication strategies that facilitate trust-building, and thereby have a greater likelihood of leading to high-performing teams. We also cite specific techniques (either from existing products or from designs of our
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This chapter is a summary of the knowledge compiled from twenty hours of research by three learning designers. To best understand the issues involved with this topic, we examined academic and business literature on teams and trust-building, virtual teaming, distance learning, and computer-mediated conversation (CMC). We also searched for best practices in collaborative products that are currently on the market. When good examples were nowhere to be found, we created our own.

How this chapter is organized

In this chapter, we first present background information and theoretical foundations on the issues of trust, virtual teams, communication. We next provide a series of design guidelines for learning designers interested in creating collaborative tools that facilitate trust-building in virtual teams, including examples from existing software, and where necessary, ideas for implementation. As food for thought, we then present serious design decisions when venturing into virtual communication tools, future areas for exploration, and ways to learn more about the various areas we discussed.

Understanding the issues

Definition of Key Terms

Different authors have offered varying definitions of a virtual team, yet they all revolve around certain fundamental characteristics. At their essence, virtual teams are:

- Temporary, where team members may not have worked together in the past and may not expect to in the future. (Jarvenpaa 1998)
- Geographically diverse, assuming that members will be operating from different cultures as well as time zones
- Focused on a collaborative effort toward a specific goal
- Rely heavily on computer-mediated communication

Broadly defined, computer-mediated conversation (CMC) refers to any form of communication between people that is mediated by a computer. CMC forms can be divided into two categories, those which are synchronous, meaning that they provide immediate feedback in ‘real time’ exchange, or asynchronous, where the communication is delayed across time. Chat is an example of synchronous conversation, while email and listservs are common examples of asynchronous communication.

Are all forms of CMC created equal?

Media Richness Theory suggests that certain types of CMC will be chosen for certain tasks because of the characteristics affordances of each media type of media. For instance, the predominant characteristics of email are its asynchronicity, which can free users from time constraints by using threaded messages, and the simplicity of being text-only (single-channel), which allows for the accurate and concise transfer of information. (Graveline, Geisler et al. 2000)
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In a study of virtual teams that had access to different types of communication media—email, web archiving, chat, and applications sharing—certain patterns of media use emerged. For instance, email communications were dominated by issues of group development and management, while synchronous chat was used mainly for task work. It would be hard to prove that one type of CMC is better than another, but it is logical to assert that different types of CMC will be chosen for for the different interaction characteristics they offer.

In the effort to focus our study, we chose to address asynchronous, single-channel communication, which can take the form of email, listservs or message boards. While some organizations are making high-tech collaboration tools available to their teams faster than others, email remains the most common denominator that virtual teams have to work with.

Trust—is it Possible in Virtual Teams?

Before we jump headfirst into recommendations about how to design collaborative spaces that facilitate communication and trust-building in virtual teams, it is important to first discuss differing opinions about whether or not trust can even exist in virtual teams. Social presence and developmental theorists are among those that express doubts.

Social presence theories assert that computer-based communication usually eliminates the visual, verbal, and social cues that individuals use to convey trust, attentiveness, warmth, and other interpersonal affectations. Without these cues, they believe that trust is difficult, if at all possible, to attain. Developmental theorists insist that trust takes time to build in teams, and since the majority of virtual teams have no shared past and most likely have a limited shared present and future, they are faced with significant challenges to building trusting relationships. (Jarvenpaa 1998)

However, studies have found that social discussion, depth, and intimacy can be greater in computer-mediated communication groups than in face-to-face groups, even for groups with geographically-separated partners that have never met in person (Walther 1995) Most of us know someone who has made a very close friend, perhaps even a husband or wife, from online virtual connections. These types of connections would be unlikely to occur were there some foundation of trust.

So if we are to agree that, even though there may be significant challenges, it is still possible to attain some degree of trust within a virtual team via electronic communication channels, it then becomes logical to examine what types of communication behaviors enable this trust to occur.

Communication Patterns Observed in Virtual Teams

In an important study on global virtual teams, Sirkka Jarvenpaa tracks the development of task-oriented global virtual teams for the duration of a collaborative project. Jarvenpaa codes and classifies each group according to the levels of trust it achieves, both initially and conclusively.

Jarvenpaa finds that the trust levels the groups attain are directly related to the communication patterns they employ. Successful strategies include attention to feedback, rich responses, exchange of social information as well as task-oriented communication, and a verbal and enthusiastic commitment from group members. (Jarvenpaa 1995) These recommendations, along with others we found through our research, formed the foundation for our design recommendations.
Are these strategies only useful for virtual teams?

Although we have focused our discussion around corporate virtual teams, these design principles and examples will be useful for the designer of any collaborative space, (i.e. online communities, distance learning, and shared workspaces.) Each type of group and, of course, each individual group within each type of group, will have its own particularities.

Even if you are successful in designing and implementing technologies that effectively persuade all members of a virtual team to employ these communication strategies, there is no guarantee that their teams will produce better results, make the company more money, or result in more satisfied employees. Each group functions differently, whether they are virtual, or more traditionally collocated.

However, if your end goal is to form trusting, high-performing groups of individuals who will be collaborating by means of computer-mediated communication, why not try to design collaborative software that encourages users to get off on the right foot with their teams right from the start, rather than leaving it to chance?

Guidelines for Building Trust in Virtual Teams

The guidelines and examples below summarize core principles that support the development and maintenance of trust in virtual teams. Through the incorporation of these principles into their products, designers of technologies that facilitate virtual team work in its various contexts will encourage the use of such strategies by users and virtual team participants. The challenges of virtual teamwork are many. The issues span geography, culture, time and technology. Products that leverage research based principles for creating a foundation of trust in online teams will empower such teams to be more effective, more productive and ultimately a more fulfilling experience for users.

Guideline #1: Keep Team Members Visible

The schedules and location of team members should be easily available to other members. The use of work-group style calendaring methods to keep track of other team member’s schedules is critical. Members should be kept aware of out of town absences, vacations, sicknesses, etc…. This could take the form of simple ground rules, but team members can also be motivated to make use of such practices through the design of tools that make team member visibility easy to track and manage.

Example: Meeting Maker

Meeting Maker is a well established platform for group scheduling and work. It also effectively demonstrates how technologies can assist in keeping team members aware of each others schedules and whereabouts.
Provides access to an entire team’s schedule. Clicking on a name reveals individual calendars.

Example: Meeting Maker Continued

Instant recognition of availability. Red signifies unavailable.

Detail of individual calendar.

Syncs with mobile device for anytime access.
Guideline #2: Establish Ground Rules for Communication

Provide guidelines for team communication processes and procedures early. Ground rules present expectations for behavior and minimize uncertainty, lack of clarity, and confusion for team members. Clear guidelines for communication are critical for establishing a structure that will facilitate trusting working relationships. When team members all have an understanding of what is expected of them, and the other members, in terms of the frequency and regularity of communication, they have a greater ability to trust the process and their teammates.

Example: Web Forums

Web based forums provide a good example of implementing ground rules for communication to group participants. Team based communication tool in integrate such features to assist in the development of clear expectations for team members.
Guideline #3: Recognize People

Team members respond to recognition from their teammates and the team leader. When work and contributions are recognized the level to which people are willing to commit to a process or team is raised. Recognition does not need to be large scale, dramatic, but it should be public. A simple and consistent “thank you” message that is relayed to an individual and received by the entire team is a significant gesture.

Example: earmyu

Earmyu the Army’s online university for soldiers provides an excellent example for recognizing individuals who have successfully completed component of the program. They have dedicated an entire section of the site to student recognition.

Photos personalize impact of recognition.

Lists names of “Success Stories”
Guideline #4: Support Initial Social Communication

Informal social communication behaviors that do not substitute, but complement task based work contribute to the development of social relationships that are key component of trust. Provide a framework where team members can share hobbies, families, and other non work related activities. Such a framework could take the form of simple photos and profiles of each team member, or even online trust building exercises where team members are encouraged to share and interact socially. The development of personal rapport between team members can be greatly enhanced through social interactions that are beyond the scope of the work environment. In an extensive study of trust in virtual teams Jarvenpaa found that “Social exchanges appeared to facilitate trust early on in the team’s existence.” The study also found that two of the highest performing teams exchanged social information integrated into otherwise task oriented messages throughout the course of their projects. (Jarvenpaa 1998)

Example: OpenText - Virtual Teams

One of the few enterprise packages that is specifically designed for facilitating virtual teamwork is OpenText’s Virtual Teams. The pages links to multiple principles, but here the focus is on the photos below. Each links to a personal profile of the team members.

Photos link to personal profile of team members.
Guideline #5: Initially, members should verbalize their commitment, excitement and optimism.

This serves to set the tone for future interactions by members associating positive feelings with the beginning of the group. Notice, in the example, there is an upbeat welcome message, even if the topic is a bit depressing, plus an action oriented section with clear steps laid out for participants. This combination of congenial communication combined with task focus was very important in studies of successful virtual teams.

Example: Weblab Discussion Board

Weblab creates tools for time limited small group discussions. They provide an excellent example of members verbalizing their commitment to the discussion.
Guideline #6: Communication should be timely and respectful.

Without the advantage of body language and face-to-face contact, remote interfaces can easily lead to offense, even when not intended. Groups can establish a set of ground-rules or utilize a software solution, which monitors communications for inappropriate phrasing.

Example: Eudora Mail

Eudora Email offers a feature to monitor for offensive material in outgoing/incoming messages.
**Example: Yahoo Groups Polling Feature**

If there are clearly defined choices and the group is having difficulty coming to consensus, then a concise poll could provide clarity and allow forward progression on the task. Also, this strategy introduces a level of anonymity, thereby encouraging participants true views will be expressed.

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**Guideline #7: Responding behaviors are as important as initiating ones.**

Participants become frustrated and disillusioned when no-one responds to their communications. Technology can help by setting automatic feedback delivery and giving simple action oriented steps for the recipient. At least then, the sender knows if the recipient is really dragging their feet on responding, or hasn’t yet read the message.

**Example: Microsoft Outlook Message Options**

Outlook, a common office application also contains useful features for message coordination.
Set Importance/Sensitivity

Track when message is delivered/read
Guideline #8: Avoid or reduce communication delays.

When communicating, it is important to initiate and respond in a timely manner so as to not hold up progress towards the goal. Frustration arises when team members are left waiting for a response to a question or need material to continue their task. Thus, in some situations it may be suitable to all work from the same set of materials, thus ensuring everyone has the most up-to-date information, even when working asynchronously.

Example: Eudora Sharing Protocol

Eudora offers a share files feature so everyone is working from the same set of updated material.
Guideline #9: Organization-- easily recognizable themes and subjects

The group should be able to organize the messages and materials easily by using numbered messages, keywords, labeling, attention to subject line, marking priority of messages. Successful organization strategies will help group members easily identify content of archived messages and recall entire strings of conversations with greater ease.

Example: WebMail

WebMail has a variety of organizational features that facilitate easy tracking of conversations, providing a sense of continuity.
Example: Microsoft Outlook

Outlook also provides important prioritization tools.

Example: Eudora

Categorize incoming/outgoing messages

Ability to mark priority of messages
**Suggestion**

Make the functionality from most email clients (respond by, prioritize, etc.) more interactive through user-customizable prompt levels. The user indicates how intrusive they want it to be.

- I really need to be nagged to respond to my email.
- I sometimes need a reminder of emails which need responses.
- I respond to email right away and don't want any reminders.

The examples above demonstrate the execution of trust building principles using various forms of software. The designers of these products may or may not have been explicitly aware of their use of such guidelines, but their products effectively illustrate how technologies can be developed that motivate and support users as they make use of effective trust building strategies in virtual teams.

**Important Design Decisions**

**Multiple Methods of Communication**

Although we have provided you with design principles and examples specifically related to email communication, this is not to say that this should be the only form of communication provided to a virtual team. Rather, it should be viewed as just one piece of the virtual pie. As Media Richness Theory details, and conventional wisdom would most likely agree, different types of media are conducive to different types of communication and task-performance. Multiple channels should be available to allow for the most successful completion of all the tasks a virtual group must perform.

Another key factor to remember is that technology alone is not always the answer. As Charles Handy, author of Trust and the Virtual Organization explains, “Trust is not and can never be an impersonal commodity. Trust needs touch. Paradoxically, the more virtual an organization becomes, the more its people need to meet in person.”

(Handy, 1995) However, Handy asserts, these in-person meetings are gradually changing focus. As the ‘business’ is increasingly being accomplished virtually, the face to face meetings are becoming more process-oriented and focused on developing personal relationships. The idea of the corporate retreat is no longer a perk for the privileged; it is the “necessary lubricant of virtuality”.

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User Control

As is always the case when designing technologies that attempt to persuade people to practice desired behaviors, you will want to make sure to take into account issues of user control. Your goal should be to properly scaffold the appropriate communication behaviors, giving users appropriate nudges when they are needed, yet not going so far as to annoy them with constant intrusions.

Microsoft learned this lesson the hard way with Clippy, their irritating, omnipresent office assistant. Clippy’s intentions were true—his main aspiration in life was to help users write a grammatically correct letter. Yet, in his eagerness to assist, he angered many a Microsoft user because there were no easy ways to regulate Clippy’s intrusions.

Microsoft XP has now replaced Clippy with a more interactive, user-controlled office assistant. The importance of user control in persuasive technologies should not be underestimated, especially in the workplace environment.

Areas of Exploration

Research on the development of trust in virtual teams is a young and developing field. There are many challenges left unaddressed, which require further study and inquiry. Issues of member diversity, leadership quality, type of task carried out (e.g. learning vs. project) all necessitate further study. Each group of team members has its own peculiarities and circumstances. It is difficult to define principles that will support the development of trust across all of the multiple potential arrangements of virtual teams, but we believe we have provided a body of work that will assist designers in addressing core issues, and hopefully developing products that motivate users to implement them in practice. The implications for design are many as well. Technologies that are directly developed for the support of virtual teams are just now beginning to become available. This presents a limited number of models, but also a tremendous opportunity for designers to have impact on a steadily expanding arena of human interaction.

How to Learn More about Trust Development in Virtual Teams

- Examine successful community sites: Weblab.org - [http://www.weblab.org](http://www.weblab.org)
- Effective Virtual Teams Through Communities of Practice [http://www.managementscience.org/research/ab0009.asp](http://www.managementscience.org/research/ab0009.asp)
- Journal of Computer Mediated Communication (CMC) [http://www.ascusc.org/jcmc/]
Conclusion

This document has attempted to outline the key aspects of trust formation in virtual teamwork. It is our hope that this work will serve to inform designers of the important issues involved in the creation, maintenance and support of trust among team members separated by geography, culture and time. The research, strategies and examples provided can guide designers as they develop the next generation of technologies and mediums of communication that best facilitate trust building. Designers shape user interactions through the products they build. Persuading users to make use of basic principles that support the development of trust can be a difficult challenge for team leaders and managers. Products intentionally designed to stimulate the use of these important strategies will contribute to effective and fulfilling working relationships for teams engaged in remote collaboration.

References


