BRINGING VIRTUAL TEAM SKILLS TO UNDERGRADUATE BUSINESS SCHOOLS' STUDENTS THROUGH CROSS-CAMPUS COLLABORATION

David Lewis
College of Management
University of Massachusetts Lowell, USA
David_Lewis@uml.edu

Timothy Shea
Charlton College of Business
University of Massachusetts Dartmouth, USA
tshea@umassd.edu

Abstract

National and international companies are now more truly national and international than ever. Information systems are converging, global intranets connecting far flung branches of a company are becoming routine, teleconferencing is moving to the mainstream, and virtual teaming is rapidly becoming a natural means for companies to best leverage internal expertise that is geographically wide-spread. To provide students with the tools to help these companies, colleges must begin to incorporate means for providing their students with both a theoretical and practical understanding of these information systems. This paper discusses a pilot project conducted between two campuses to provide students with an experience using virtual teams. The project is described in detail in this paper.

Keywords
virtual teams, videoconferencing, campus collaboration

Background

National and international companies are now more truly national and international than ever. Information systems are converging, global intranets connecting far flung branches of a company are becoming routine, teleconferencing is moving to the mainstream, and virtual teaming is rapidly becoming a natural means for companies to best leverage internal expertise that is geographically widespread. General Electric, as one example, is installing real-time collaboration tools to over 300,000 employees around the world as well as web applications that will connect thousands of suppliers and customers (Drucker, 2000).

For virtual teams to exist, they have to have a purpose, a collection of people and communication links (Lipnack & Stamps, 1999). The purpose is often to get a job done quickly (Chase, 1999). In order to function quickly and efficiently, virtual teams members need to be skilled in two areas, the technical and the human. Participants need to know how to use of various technologies including audio-conferencing, videoconferencing, email, chat rooms, discussion boards, smart boards, group calendars, and the like. Participants also need to learn how to communicate using technology, the lack of face-to-face encounters, as well as time zone, language and culture differences (Duarte & Snyder, 1999).

Virtual team leaders also have their unique challenges, as they are responsible for keeping the communication flowing. "The problem … (with virtual teams is) … usually some breakdown of communication. This is true in any group of people coming together; it's just exacerbated in a virtual environment" (Chase, 1999, p. 76). The lack of regular visual and nonverbal cues also inhibits the normal development of trust among team members. "Swift" trust may exist at the beginning but is often fragile (Jarvenpaa & Leidner, 1999). Setting clear expectations and being particularly concrete in defining tasks are two ways to foster trust in the ambiguity of cyberspace (Platt, 1999). Additionally, leaders are advised to keep the virtual groups small in spite of the electronic ease in expanding group size (Katzenbach & Smith, 2001).

Simply put, the importance and effective use of virtual teams has been identified as one of the "five imperatives" emerging from information technology that will force organizations to "change … structures, process and in human behavior" (Herman, 2001). As such, undergraduate and graduate programs in Management must begin to incorporate means for providing their students with both a theoretical and practical understanding of virtual teams. This paper discusses a pilot project conducted between two campuses to provide students with just such an experience.

Current Project

The current project will include approximately 125 University of Massachusetts undergraduate business students and two University of Massachusetts professors experienced in creating and implementing virtual teams by completing group projects involving students at two different campuses. The project will include using videoconferencing throughout the class including a final group presentation between the two campuses and a final paper. To develop the final project, students will use a variety of collaborative tools including email, a discussion forum, and chat. These presentations will then be saved for future reference. The authors will also create a website which will include a web-based tutorial on creating and conducting successful virtual teams.

The courses involved include an introductory Management Information Systems (MIS) class from Lowell (UML) and a Networking class from Dartmouth (UMD) (online). The premise for each project is that each team will have several members from Lowell taking the role of end-users and several members from Dartmouth taking the role of technical support. Each team will have a project where they have to contend with both a business and a technical component. The H. E. Butt Grocery Company: The New Digital Strategy (Dailey & McFarlan, 2001) will be used as the basis for this project. The teams in Lowell's MIS classes will be responsible for working with the business component. Each MIS class team will need to communicate (virtually) their technical support requirements to their counterpart team from Dartmouth's Networking class. The teams from Dartmouth's Networking class will be responsible for working out the technical components. Each full team will be required to use both synchronous and asynchronous tools throughout the semester and once at the end of the semester for the final presentation. A description of the research project guidelines can be found online (online).

We will use the Intralearn software system that is currently used by the University of Massachusetts of Lowell and this project will include a number of collaborative components. These components include:

Asynchronous components:
1) Email: sending email to all members of the group (with a carbon copy being sent to the instructor at their own campus as indication of use)
2) Discussion forum: group members respond to questions posed by the instructor, again using a class website created in Intralearn.

Synchronous components:
3) Chat: all group members must get together at one time (recorded in chat session such as Intralearn)

4) Mid-Project Team Status Report: each full team, half from Lowell and half from Dartmouth, will meet using the high speed Network (MITI) currently in place between the two campuses.
5) Final Presentation: students must show integration, at least by rotating between campuses on day or presentation. This final presentation will be made using the MITI Network.
6) Two lectures between campuses using the MITI Network.

Each of the instructors is teaching two sections of the same class during the Fall semester, 2001. This will allow us to vary the project slightly between sections. For ease of identification, we will call these Group A (the 10:00 section from UML and the 9:30 section from UMD) and Group B (the 11:30 section from UML and the 2:00 section from UMD). Group A will use all of the components described above since there are 45 minutes of overlap between sections every day. Group B will use all of the components except for the videoconferencing piece.

To evaluate the success of the project we will conduct two surveys. The first survey evaluates student usage of technical tools (email, chat, PowerPoint presentations, sending attachments, etc.) This survey will be conducted at the beginning and the end of the class to assess if there is any improvement. The second survey will be conducted at the end of the project. Questions will evaluate the success of the project. We will also be able to see if there are any differences between campuses, and between the two groups; that is, between the group that used videoconferencing and the group that did not.

We believe that business students must learn how to use collaborative learning and meeting tools. Using the tools across campuses forces students to use them as they are located too far apart to meet in the same place. With the Public University system in Massachusetts now operating on the same schedule, logistical issues in terms of class meeting times are reduced.

This project includes terminology and technology that is part of the course content, making it a perfect place to incorporate this project. Both courses are taught to similar cohorts – juniors in the business curriculum. Additionally, students will become experienced in working in virtual teams – an increasingly common reality in day-to-day business. We should gain some insights as to the importance of videoconferencing to virtual teams success. Students also get practice in working in diverse groups, and in both written and oral communication skills – common, stated goals across the University of Massachusetts system.

After the class is completed, a web-based tutorial on creating and conducting successful virtual teams will be developed. The tutorial will be based upon this project as well as a review of best practices for high-performance virtual teams. We will share a status report of this tutorial of "what we have learned" at the conference.

If this project is successful, it could be used as a model for teaching between any two Universities. Maybe next year we will set up teams between the University of Massachusetts and the University of Melbourne. Virtual teams are commonly used in business today, and there is not a better way to understand the difficulties and benefits in working from afar than personal experience.

References

Chase, N. (1999). Learning to lead a virtual team. *Quality*, *38* (9). [Online]. Available: http://www.qualitymag.com/articles/1999/aug99/0899tt.html [24 September 2001].

Dailey, M. & McFarlan, F. (2001). H.E. Butt grocery company: The new digital strategy (a). Harvard Business School Case 9-300-106.

Drucker, D. (2000). Virtual teams light up GE – customers, suppliers linked in real time with collaboration apps. *Internetweek*, 1, 16.

Duarte, D. & Snyder, N.T. (1999). *Mastering virtual teams*. San Francisco, CA: Jossey-Bass.

Herman, S. (2001). Counterpoints: Notes on OD for the 21st century – part II. *Organization Development Journal, 19* (1), 115-118.

Jarvenpaa, S.L., & Leidner, D.E. (1999). Communication and trust in global virtual teams. *Organization Science, 10* (6), 791-815.

Katzenbach, J. & Smith, D. (2001). Virtual teaming. *Forbes*, May 21, 48-51.

Lipnack, J. & Stamps, J. (1999). Virtual teams. *Executive Excellence, 16* (5), 14-15.

Platt, L. (1999). Virtual teaming: Where is everyone? *The Journal for Quality and Participation, 22* (5), 41-43.

Research project guidelines. [Online]. Available: http://faculty.uml.edu/dlewis/63.301/resprojguidelines.htm [24 September 2001]

University of Massachusettes Courses [Online]. Available: http://webcourse.uml.edu [24 September 2001]