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"Virtual" Project Team Environments

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AN INVESTIGATION OF GROUP DEVELOPMENT PROCESS
IN "VIRTUAL" PROJECT TEAM ENVIRONMENTS

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Abstract
In this field study, the group development process in a “virtual” project team environment characterized by distributed team members working across time and/or geography for the duration of the project in a non-face-to-face model was investigated. The primary research question was, “How do groups develop in virtual project team environments and what role does groupware technology play in that development process?” To answer this question, the following propositions were advanced based on a literature review on group development and communication media research.

P1. In virtual team environments, groups will show much more complex group development paths than under face-to-face environments.

P2. In virtual team environments, production function will be dominant, while there will be a lower level of well-being and member support functions.
   Corollary: Groupware that supports virtual teams will be dominantly used to achieve production function.

P3. In virtual team environments, groups that maintain balance among three functions — production, well-being, and member-support — will outperform other groups and perceive their interactions more positively.

The research methodology was a field study with a content analysis of electronic transcripts of group interactions via LotusNotes, a groupware for asynchronous communication. Twelve four-person teams of MBA students from two major state universities located in the mid-Atlantic and the Southwest regions of the United States participated in this study. Participation in the study was a component of a Business Process Reengineering course, each team consisted of two students from each of the universities. Student teams were asked to analyze a Harvard Business School case and respond to three specific questions. Total duration of the project was four weeks. At the end of the fourth week, each virtual team prepared a final report and submitted it to their local instructor.

Three different measurement approaches were taken in this study. First, the number of production oriented interactions, well-being oriented interactions, and member-support oriented interactions among team members were measured and then mapped into a group developmental path diagram as suggested by McGrath (1991). This content analysis allowed us to see whether there were consistent patterns emerging from a number of different virtual project teams. Second, the students’ perceptions of the technology environment were measured using the role classification for group support systems (Zigurs and Kozar 1994) to ask about the role that technology played in their project. The perceived quality of group interaction was also measured by ten items derived from Green and Taber (1980). Finally, the team performance was measured using the project scores, which were blindly scored by one instructor.

Currently, all the project reports have been graded. All the electronic transcripts have been printed out and are currently being coded. The result of the content analysis will be available at the presentation.

REFERENCES
