Chapter 15
The Effects of Communicative Genres on Intra–Group Conflict in Virtual Student Teams

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ABSTRACT
With increasing convenience and prevalence, the distant communication application has become a promising way for individuals who are eager to cooperate and interact virtually. This study explored the question of whether the collaborative interaction of the virtual teams has any effect on the conflict and network structure of virtual groups. A total of 150 participants were invited and randomly assigned to thirty groups with each group of five subjects. To function like real virtual groups, they were asked to communicate with their members through e-mail. Through genre analysis and social network analysis, nine communicative genres most frequently used in the collaborative groups were identified. Results of correlation analysis suggested that it was the communicative genres, not the network structure, that were associated with intra-group conflict of virtual group. Accordingly, whether the network structure of the virtual group is centralized or decentralized may not be instructors' or developers' major concern. Instead, they may wish to focus on a well-designed interface providing needed supports of communicative procedure for coordinating with distant members.

INTRODUCTION
The advance of computer mediated communication (CMC) not only releases the constraints of time and location for individuals while interacting, but also changes the way of interpersonal communication. As a result, it draws much attention of researchers from various domains. Some researchers of interest to virtual teams continue to explore the outcomes of using CMC to interact...
with virtual team members (Lee, 2004; Wilson, Straus, & McEvily, 2006; Van der Meijden & Veenman, 2005). Others provide alternative aspect to this issue, in that diversity such as different cultural and psychological backgrounds among team members adds complexity to the functioning of virtual teams (Lapinski & Rimal, 2005; Zoller, 2005; Kreijns, Kirschner & Jochems, 2003). In this study, we distinguish research of interest to virtual teams into two streams, namely psychotechnical perspective and sociotechnical perspective. The former mainly focuses on the relationships between technology and psychological status, whereas the latter frequently deals with relationships between technology and social practice. While agreeing both streams have shed light on this issue, we think that both streams are potentially intertwined but are seldom put together in the past research. Consequently, this provides a motivation for this study to supplement our understandings of virtual teams by synthesizing both perspectives.

Media richness theory, for example, is one of the most common groundings for research with psychotechnical perspective. Based on the tenet of media richness theory, attributes of the media refer to the determinant that affects individuals’ usage and message content of the CMC, and consequently leads to outcomes of distant interaction. In this regard, communicating via CMC may not always be beneficial for participants. Compared to face-to-face communication, CMC provides a reduced cues environment that is ill-suited to emotional, expressive or complex communications. In sum, the lens of psychotechnical research suggests that it is the features of CMC that affects individuals’ uses and outcomes of interacting in virtual ways. Accordingly, it is foreseeable that any technological feature that is potential to eliminate individuals’ psychological distance is welcome in this stream.

On the contrary, research with sociotechnical perspective, which mainly based on social cognitive theory, suggests that an individual’s behavior is partially shaped and controlled by the influences of social network (i.e., social systems). More specifically, the use and impact of CMC are dependent on the type of tie connecting communicators, which in turn determines the ways, means, and expression of communications. Furthermore, the social influence model posits that perceptions of media characteristics are in part socially constructed and that the selection of a medium frequently reflects social forces in addition to attributes of the medium. Researchers have explored the impact of social relationships on media use, suggesting that the use of communication technology is socially constructed (Orlikowski, Yates, 1998). In contrast to research with psychotechnical perspective, the lens of this stream proposes an alternative contention suggesting that social relationships determine the adoption of medium and then constitute the meaning of a message.

Prior studies based on the psychotechnical perspective have ignored the importance of social influence. Consequently, this study synthesize perspectives of both streams and primarily focus on the relationships among individuals’ psychological status, social relations and practical content. More specifically, this paper addresses the question of whether the collaborative interaction of the virtual teams has any effect on the conflict and network structure of virtual groups.

**LITERATURE REVIEW**

**Network Structure of Virtual Groups**

“Communication” means which one informs of whom through which route, and that finally brings what result. In the other words, interpersonal communication may create a structure which in turn affects what else gets said and done and by whom (Keyton, 1999). In this regard, groups are inherently networked because their members have to interact with one another to settle down the shared goals (Rulke & Galaskiewicz, 2000). Communicative structure influences not only
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