

Chapter 4.6

Improving Virtual Teams through Swift Structure

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INTRODUCTION

There has been a transformation from individual work to team work in the last few decades (Ilgen, 1999), and many organizations use teams for many activities done by individuals in the past (Boyett & Conn, 1992; Katzenbach & Smith, 1993). The use of virtual teams has also become common particularly in international organizations and global companies. In light of this growing phenomenon, the traditional definition of “team structure” should be redefined, as part of the model that predicts the influence of the virtuality and structural levels on processes, social, and tasks, that effect team output. A methodology will later be illustrated to examine

the research model and a discussion of preliminary finding. The research contributes to better understanding of virtual teams in hope of improving the teams work in the virtual world.

Virtual team design has so far been treated as an afterthought by virtual team researchers. Investigation of team structure in the virtual environment holds significant promise for research and practice (Powell, Piccoli, & Ives, 2004). Integration between virtual teams and structural characteristics raises the question: “Has the virtual era put an end to team structure?” Leavitt (1996) claims that the rapid changes impose organizations to relax structures. Hackman (2002), on the other hand, predicts that team structure will always exist and managers will continue to be bothered by team design.

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BACKGROUND

We will review virtuality levels and structural characteristics of teams, in order to grasp an integrated view of the subject.

VIRTUALITY LEVEL

Virtuality level of a team has become an integral part of a team's definition (Martins, Gilson, & Maynard, 2004). Many variables are affected by the virtual level of a team. Face-to-face team members are more cohesive (Huang, Wei, Watson, & Tan, 2003), have stronger social ties (Warkentin, Sayeed, & Hightower, 1997), are more dedicated to the task and to other team members (Olson & Teasley, 1996), have a stronger team identity (Bouas & Arrow, 1996), and have more affection to other team members (Weisband & Atwater, 1999) than in virtual teams. Strong social ties in virtual teams can be achieved but will take longer time than in face-to-face teams (Burke & Chidambaram, 1996). Many researchers have attempted to find the reasons why virtuality has a negative influence on team output, such as, frequency and distance (Cramton & Webber, 1999), the fact that team members are not personally familiar with one another (Gruenfeld, Mannix, Williams, & Neale, 1996), the difficulty in sharing information, and insufficient and confusing discussions (Thompson & Coover, 2003). Another group of researchers compared communication technologies, assuming that technology limits information (Straus & McGrath, 1994). The comparisons concluded that face-to-face teams are more efficient than teams using video (Andres, 2002), and video communication is more efficient than audio (Burke, Aytes, & Chidambaram, 2001); adding text into video or audio communication improves performance (Baker, 2002), and satisfaction (Olson, Olson, & Meader, 1997). Maruping and Agarwal (2004) show that teams tend to use different sorts of

communication technologies for different kinds of interpersonal interactions.

CHARACTERISTICS OF TEAM STRUCTURES: DIVISION OF LABOR, HIERARCHY, AND WORK PROCESS

Division of Labor

The division of labor does not have a direct influence on team performance, but has an indirect influence, by means of perceived efficiency and team coordination (Strijbos, Martens, Jochems, & Broers, 2004), and is a stronger prediction variable than individual characteristics (Ahuja, Galletta, & Carley, 2003). The use of expertise assists in reducing errors (Potter & Balthazard, 2002) and function diversity is important in achieving team efficiency (Bunderson & Sutcliffe, 2002). A team that is structurally diverse is one that its members have different positions or tasks and are distributed in different branches, and can be exposed to unique information. In this manner, sharing unique external information elevates performance (Cummings, 2004).

Hierarchy

In order to explain the importance of the manager in integrative groups, Maier (1967) compares the group to a starfish and the leader of the group to the starfish central nervous system. When individuals act as an organized unit, they become a higher type of organization, that is, a single whole organism. Even when there is no formal division of labor, the role of the leader is divided between various team members (Johnson, Suriya, Yoon, Berrett, & La Fleur, 2002). When there is a formal leader, status labels have a strong effect on team members (Weisband, Schneider, & Connolly, 1995). But a series of studies have shown that more importantly, effective virtual leadership is dependent on the ability to communicate (Kayworth & Leidner,

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