

Successful Virtual Teamwork

How do task and social dynamics determine virtual team performance?

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Introduction

Theoretical background

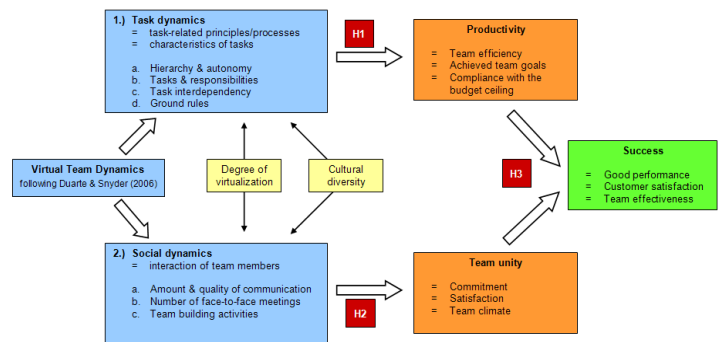
Virtual teams are becoming more and more commonplace in organizations (Gibson & Cohen, 2003; Hertel, Geister, & Konrad, 2005; Hinds & Kiesler, 2002). More than half of the companies with 5,000 or more employees deploy virtual teams (de Lissner, 1999). A survey implemented by Kanawattanachai and Yoo (2002) found that more than 60% of professional employees work in virtual teams. Remote and mobile work strategies, globally dispersed locations, the flexibilities of markets, and the necessity to be close to the customer require virtualization.

Virtual teams are defined as at least a group of two people that work together on a task independent of space, time, and organizational borders (Lipnack & Stamps, 2000). They realize the communication and cooperation almost exclusively by electronic media (Hertel, Konrad, & Orlikowski, 2004). The dynamics of a virtual team are likely to influence their effectiveness (Duarte & Snyder, 2006). Specific team characteristics, different work processes, and social interactions have a considerable impact on the deliverables. Therefore it is important to identify the technical and social factors that influence the team performance and are affected by the virtual and intercultural setting.

The aim of the current study is to get a representative view of the virtual team dynamics and the influences on the productivity of virtual teams, their cohesiveness, and performance. It should detect the critical success factors of virtual teamwork and develop specific actions and recommendations on how to improve the virtual team performance. It examines the difference between virtual high and low performing teams and identifies the right environment to facilitate virtual teamwork.

Hypotheses

1. The better the task dynamics the higher the productivity of a virtual team. Self-responsibility, clear work instructions, and high task interdependency promote virtual team efficiency.
2. The better the interaction of virtual team members the better their team unity. Extensive communication, face-to-face meetings, and team building activities foster the cohesion of a virtual team.
3. The higher the productivity and the better the team unity the greater the success of virtual teams. The combination of task effectivity and social capability is best to maximize the virtual team outcomes.



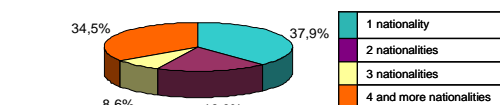
Graphic 1: Expected correlations between the variables.

Method

Sample and Setting

The study was conducted within IBM Germany Corp. and investigated 65 virtual teams with over 850 members from all over the world. The teams had on average 13 members ($SD = 8$), the smallest one counted four and the biggest one 40 persons. The response rate lasted around 60%. About 85% of the team members worked remote from their team leader. Tenure of the teams was about 32 months ($SD = 30$).

IBM teams showed a high degree of diversity and virtualization.



Graphic 2: High diversity in virtual IBM teams: Over 60% of them were composed of different nationalities.

Over 60% of them were composed of two or more nationalities. On average every team was dispersed on six ($SD = 4$) different locations with an average distance of 3700 miles. This implicated a clear necessity to communicate electronically. According to leaders' rating, about 81% of all communication within the teams were realized by electronic communication media ($SD = 19$).

Instruments

The first step of the investigation included a structured interview with team leaders. Most of them were telephone interviews with 43 questions and lasted about 30 minutes. They contained questions about the characteristics of the team and its tasks, detailed ratings of the team's effectiveness according to its goals, and questions about management practices.

In the second step an internet-based questionnaire completed by team members was implemented. It contained 73 items which were answered on 5-point scales ranging from strongly disagree (1) to strongly agree (5). The items measured the perceived quality of goal setting and conflict management, rated the team members' commitment, motivation, and trust, as well as assessed the leadership behavior and communication styles. In addition, information of job experience and familiarization with virtual teamwork were collected at the end. All scales showed a satisfying reliability from .71 to .93 (alpha).

This combination of instruments allows a both-side interpretation from manager and employee perspective of the critical success factors in working with virtual teams. All main analyses will be computed at the group level based on aggregated item and scale scores of the team members.

The hypotheses will be tested in the following weeks and the final results will be available at the end of September 2009.

Literature

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