

Successful Virtual Teamwork

How Do Work and Leadership Processes Determine Virtual Team Performance?

Manuela Oettinger

Johannes Gutenberg University of Mainz
Department for Work, Organizational, and Economic Psychology

in Cooperation with the

Westphalian Wilhelm's University of Muenster
Department for Organizational Psychology



Introduction

Theoretical background

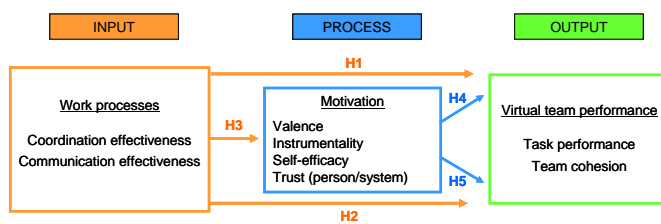
Today's complex work environment requires more and more globally integrated enterprises to fulfill the customer's needs (Palmisano, 2006). Bringing the right skills to the right customer at the right costs forces teams to become increasingly virtual (Duarte & Snyder, 2006; Gibson & Cohen, 2003). Mobile 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, Konradt, & Orlikowski, 2004).

The aim of the current study was to identify the critical success factors of virtual teamwork at IBM and to define the right environment for high team performance. It focused on the work processes of virtual teams and examined whether coordination and communication effectiveness lead to increased team performance. It was assumed that these connections have been mediated by motivational processes. That implied coordination and communication as important predictors for motivation gains and performance enhancements of virtual teams. Additionally, the influence of leadership on virtual team success was exploratively investigated.

Hypotheses

1. The quality of work processes lead to increased task performance.
2. The quality of work processes lead to increased team cohesion.
3. The quality of work processes lead to increased motivation.
4. The relation of work processes to task performance is mediated by motivational components of the VIST model.
5. The relation of work processes to team cohesion is mediated by motivational components of the VIST model.

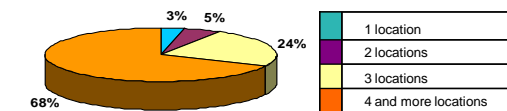


Graphic 1: Research model of successful virtual teamwork.

Method

Sample and Setting

The study was conducted within IBM Corporation and investigated 59 virtual teams with over 830 members from all over the world. The teams had on average 14 members ($SD = 9$). The response rate lasted around 60 %. About 85 % of the team members worked remote from their leader.



Graphic 2: High dispersion of virtual IBM teams - over 60 % of them were distributed on 4 or more different locations.

IBM teams showed a high degree of diversity and virtualization. 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 4150 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 performance 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, 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 .65 to .86 (alpha).

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

Results

Results

Consistent with the assumptions, an improvement of the work processes within virtual teams was accompanied by better business results. Especially coordination effectiveness could be assumed to predict the task performance. Concerning the team cohesion, improved coordination and communication led to better commitment and improved team climate. This underlined the importance of coordination and communication effectiveness for virtual team performance and justified the efforts to improve the work processes.

The motivational variables were also affected by the work processes of virtual teams. An optimal degree of coordination resulted in an enhancement of members' self-efficacy and trust. Effective communication had considerable influence on the valence and instrumentality and led to an increase in trust. The work processes and virtual team performance were partly mediated by specific motivational variables. Effective work processes heightened the importance of the team goals and increased the trust among the members. This caused a higher effectiveness of virtual teams.

Finally, it could be assumed that better leadership processes led to increased task performance. Concerning team cohesion, the results revealed effective leadership as an important precondition for a good team climate. The wellbeing of employees was significantly influenced by the leader's quality.

Recommendations

Coordination

- Create a team charter at the beginning of the collaboration.
- Involve every team member when defining coordination processes.
- Set up smart goals and monitor them regularly.
- Adjust your coordination processes to actual needs.

Communication

- Exchange information regularly.
- Synchronize the communication whenever possible.
- Support informal communication within the team.
- Use different tools to convey multiple aspects of a message.

Leadership

- Empower team members to work autonomously.
- Build up trust.
- Foster collaboration among team members.
- Provide specific feedback timely.