Virtual Teams, Organizations, and Networks (VTONS)

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Abstract

Teamwork in organizations today is generally characterized by members working across multiple spatial and temporal boundaries in complex configurations comprised of multi-team memberships, member turnover, and multiple organizational boundaries, among other things. Contemporary virtual teams can rarely be studied as single units because they are often co-mingled into larger organizational networks with multiple teams, locations, and organizational overlap. Most business, government, and scientific projects and processes today have a very prominent virtual dimension. Virtual collaborators often do not have the same first language, come from different national cultures, work in different time zones, may be employed by different organizations, and enter collaborations with different expectations for group processes. These differences, among others, present unique opportunities for management and leadership.

1. Introduction

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Because of the multi-disciplinary nature of research on virtual teams, organizations, and networks, we encouraged submissions that may inform practice and research in virtual collaboration through a variety of academic lenses. We also encouraged papers discussing methodological issues and innovation to address the complexity in the study of virtual teams, organizations, and networks. This mini-track includes papers that offer direct and indirect insights into the successful operation of virtual teams, organizations and networks, including research in the vein of computer supported collaborative work (CSCW), computer supported collaborative learning (CSCL), and social and organizational networks.

2. Mini-track Topics and Themes

The topics we proposed for this mini-track included:

- Spatial and temporal separation and its effects on collaboration
- Coordination in virtual collaboration
- Cultural differences in perception of time
- Conflict management across cultures
- Project management styles and differences across cultures
- Differences in language understanding and its effects on collaboration
- Power distance and its effects on collaboration
- Uncertainty (risk) avoidance and its effects on collaboration
- Anonymity in multicultural teams
- eLeadership
- Deception in virtual teams
- Social loafing in virtual teams
- Personality and its role in virtual teams
- Cross-cultural training
- Virtual team collaboration and innovation
- Emotion in virtual teams
- Relationship building in virtual teams
- Information sharing in virtual teams
- Collaboration and communication tools

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- Differences between academic and non-academic virtual teams
- Virtual team case studies
- Social Network Analysis and virtual teams
- Identifying multi-level influences on virtual teams, organizations, and networks
- Multi-teaming in virtual collaboration
- Scientific collaboration in virtual teams (Team Science)

Our call for papers yielded a variety of excellent papers that covered many of these topics. This mini-track includes the six best papers identified by peer review. Collectively, the selected papers present research and practical lessons about the effective use of technology to support collaboration. The papers also present experiences from the individual user and team level perspectives, both of which are essential to a comprehensive understanding of virtual collaborations.

In the following sections, we present the authors' summaries of their work to be presented.

3. Paper 1: A Typology of Virtual Research Environments

Virtual Research Environments (VREs) are online spaces that support communication and collaboration among scientists. Hundreds of VREs have been constructed using various configurations of research tools and information and communication technologies (ICTs) to serve many disciplines and interdisciplinary inquiry. This study characterizes a large sample of VREs in terms of the research and ICT resources they incorporate and derives a typology of VREs based on their particular ICT configurations. The four types are correlated with previous VRE typologies and disciplinary domains. Results indicate that there are correspondences, but that types of ICT configurations also exhibit complex relationships with function and discipline.

4. Paper 2: Computer Mediated Communication in Negotiations: The Effect of Intragroup Faultlines on Intergroup Communication and Outcomes

This work examines the effect of faultlines in virtual computer mediated communications of two collocated negotiation teams. We expand upon prior diversity literature by considering the effect of both surface and deep-level faultlines on the inter-team

computer mediated communications in virtual negotiations. Faultlines are hypothetical lines that divide teams into multiple subgroups based on diversity attributes. We confirm that the effect of team diversity on inter-team computer mediated communications can be better captured through faultlines. Our results suggest that faultlines mediate the effect of diversity on teams' computer mediated inter-team communication and that deep-level faultlines significantly lower the frequency and quality of inter-team communication of virtual negotiations.

5. Paper 3: Beyond Being There, for "All of Us": Exploring Webconferencing and Mobile Remote Presence Devices for Accessible Global Governance

United Nations efforts to support multistakeholder global governance continue to lag for persons with disabilities. Given the expense of face-to-face meetings, accessible ICTs could play an important role, enabling remote participation. However, what types of collaboration technologies best meet UN goals and those of remote participants? This study compares use of webconferencing technologies to mobile remote presence devices (MRP) in a UN conference in Mexico addressing Disaster Risk Reduction. It takes an exploratory action research approach working with UNISDR and the Disability- inclusive Disaster Risk Reduction (DiDRR) Network #AllofUs to convene four remote hubs (Suva, Dhaka, Geneva, DC), each controlling their own MRP in Cancun and having access to the webconference, along with other remote participants around the world. We ask: Which technologies best support required conference tasks; and what challenges arise with their use?

6. Paper 4: Towards Semi-Virtual Design Thinking - Creativity in Dispersed Multicultural and Multidisciplinary Innovation Project Teams

This paper aims at examining whether the innovation approach Design Thinking (DT), which is usually performed in an analogue setting, can also be performed in a semi-virtual setting. We conducted an experiment comparing a fully analogue to a semi-virtual DT workshop with overall 59 participants from 27 different countries and 11 different disciplines separated into an experimental- and control group. For the evaluation, we composed items from the psychological construct of Shared Mental Models

(SMM) and discussed existing Media Theories in order to draw conclusions on the impact of performing DT semi-virtually in regard to using a digital whiteboard. Against our expectations and assumptions from theory, we reveal that a semi-virtual DT workshop can lead to high levels of shared understanding, satisfaction and perceived effectiveness. We argue that the applied digital whiteboard supports a creative semi-virtual collaboration due to its advanced functionalities, which supports the Media Richness Theory.

7. Paper 5: Towards a Model of Collaborative Intention: An Empirical Investigation of a Massive Online Open Course (MOOC)

Understanding factors that impact one's intention to collaborate is an important endeavor for manage- ment education and in particular for globally disper- sed groups of students. Drawing on a synthesis of four theories, we advance a model of collaboration intentions. The resulting model combines individual level and communal level factors that influence individuals' intentions to join virtual collaboration. The model is tested drawing on data collected from 2517 participants in a Massive Online Open Course (MOOC). Results demonstrate that attitudes towards virtual collaboration are predicted by both outcome expectancy and perceived communal influence. The first factor, outcome expectancy, is itself predicted by individual beliefs about his/her ability to collaborate. The second factor, support expectancy, is impacted by perceived communal influence on collaboration.

8. Paper 6: Rethinking Media Synchronicity Theory: Examining the Cooperative Assumption

Much of information systems (IS) literature assumes team members have completely aligned goals. In practice, people interpret goals to suit personal agendas, even when they are collaborating. This motivates our examination of the cooperative assumption in Media Synchronicity Theory (MST)—a leading IS theory of communication performance. We assess the boundaries of MST by relaxing the assumption of cooperation. Our results support MST for explaining communication and task performance in a cooperative context. However, MST was insufficient to capture how media capabilities influence performance in a non-cooperative context. Our study shows that relaxing the assumption of cooperation changes MST in profound ways—altering which media capabilities are central to the model and the very processes that underlie communication.

9. Towards a HICSS VTONs Community

We believe this mini-track has great potential to stimulate the creation of a robust, interdisciplinary HICSS community studying virtual teams, organizations, and networks (VTONs) from a variety of perspectives. Given the increasing use of virtual teams, organizations and networks in industry, academia, medicine, and civil society broadly, such a community that uses research to inform best practices would be invaluable. The VTONs papers at this 51th HICSS represent what we see as an important trend, which we believe will remain for many years to come. It is a privilege to bring you these exciting papers and we look forward to having productive and stimulating discussions about current and future VTONs issues.