Social Media Usage and its Effect on Virtual Team Dynamics and Performance

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Abstract

Virtual teams are groups of individuals who are geographically dispersed and constrained by different time zones but have to co-ordinate their project work by using suitable communication technologies. Email, videoconferencing, telephone and fax are used for virtual team communication. Corporate organisations are actively engaging with social media for corporate communications due to the number of advantages it offers; global reach, ease of use, near real time communication and is relatively inexpensive. Virtual team performance is measured in terms of various performance indicators (dynamics) such as trust, team cohesion, team satisfaction, communication, leadership and reduced conflicts. There are visible gaps as the current literature only mentions social media use (blogs and wikis) in a supportive role for virtual team communication. The proposed research employs a Transactive Memory Systems (TMS) approach to determine the effect of social media usage on virtual team dynamics. The research outputs would fill the gaps in literature and contribute to the existing knowledge on virtual teams and social media. The practical relevance of this research lies in the guidance for virtual team managers and members.

Keywords
Social Media, Team Dynamics, Transactive Memory System, Virtual Teams.

1. Introduction

Virtual teams are comprised of geographically and time dispersed individuals who collaborate through ICTs (Bastida et al. 2013; Kirkman et al. 2002) to accomplish a task. Communication is the key enabler of a virtual team (VT) and communication technologies such as email (Brown et al. 2007; Jarvenpaa and Leidner, 1998), videoconferencing (Brown et al. 2007; Duarte and Snyder, 2011), fax and telephone (Brown et al. 2007; Duarte and Snyder, 2011) are used for VT communication.

The existing literature mentions little about social media usage in a virtual team context (Bastida et al. 2013; Brown et al. 2007). Virtual team performance is measured in terms of virtual team dynamics such as trust, satisfaction, team cohesion communication, reduced conflicts and leadership (Maznevski et al. 2006). To the best of researcher’s knowledge there is no prior study focusing on the effect of social media usage on virtual team dynamics and consequently, there is no evidence towards a measure of social media usage on virtual team performance. This gap in knowledge forms the basis for this research. The research questions for this study are:

RQ1: How do social media affect virtual team dynamics?
RQ2: Can social media create an improved Transactive Memory System of a VT?
2. Key Terminologies

Effective virtual teams are the key to many successful VT projects. Virtual team performance is measured in terms of a number of performance indicators or virtual team dynamics (Maznevski et al. 2006) as identified in the literature:

2.1 Trust

Trust is defined as “a state involving confident positive expectations about another’s motives with respect to one’s self in situations entailing risk” (Boon & Holmes, 1991, pg. 194). Trust is regarded as a vital component of a virtual team. In this research, the trust between the team members is referred to. Virtual teams develop trust after repeated communication and sharing of information electronically (Henttonen & Blomqvist 2005; Kirkman et al., 2002). The more the level of trust in a VT, the higher the collaboration levels (Peters & Manz, 2007). Trust is therefore important in a VT as the members have minimal face to face communication in order to form relationships (Horwitz et al. 2006). Drawing on the existing literature on trust, it is understood that frequent communication, knowledge sharing and a sense of shared understanding (Horwitz et al. 2006) encourage the development of trust in a virtual team.

2.2 Team Cohesion

Team cohesion is highly desirable in a virtual team and it has a capability to create knowledge workers who can pool their expertise (Sivunen & Valo 2006) to suit a variety of tasks. Trust acts as a precursor to team cohesion and proper member-task pairing increases team cohesion (Malhotra et al. 2007). Team cohesion ensures that team members are aware of each other’s expertise (Sivunen & Valo 2006) and this forms the basis for team cohesion in virtual teams.

2.3 Satisfaction

Team satisfaction is essential for teams as satisfied team members perform better and raise the productivity of the team (Lin et al. 2008). Team satisfaction is triggered by trust and team cohesion in virtual teams. Team satisfaction is also achieved by appropriate skill matching, and satisfied team members tend to work in an organized manner (Curseu et al. 2008; Shachaf 2008). Team satisfaction is an important element that contributes to overall team performance. Hence, appropriate skill matching, individual’s self organisation, inter member trust and levels of team cohesion improve virtual team’s satisfaction levels.

2.4 Communication

Communication is the foremost enabler of a virtual team and in its absence a VT would have ceased to exist. VTs are often marred by communication problems (Carvalho, 2008; Daim et al. 2012). Communication breakdowns occur in VTs as evidenced by the previous literature (Malhotra et al. 2007; Rosen et al. 2007). These problems are far more widespread in newly created VTs (Hinds & Mortensen, 2005). A sense of ‘shared meaning’ (Bjorn &Ngwenyama, 2009) helps in case of a communication breakdown as team members are in a position to adjudge others’ thoughts and perceptions in a way that the task can be accomplished with even little information that can be found in the communication media. Therefore, it can be understood that frequency of communication (Horwitz et al. 2006) and shared meaning lead to communication effectiveness in a virtual team.
2.5 Reduced Conflicts

Virtual teams encounter conflicts at times, which have a capacity to downgrade the team’s morale, efficiency and productivity (Griffith et al. 2003; Montoya-Weiss et al. 2001). Conflicts can be much more pronounced in VTs than in co-located teams as the members might not be able to sort out the issue by meeting face-to-face (Brown et al. 2007) and due to the diversity of the team, the conflicts can take a bad shape (Baan, 2004). Success of a VT project depends on ‘collaboration awareness’ where the teams remember critical information (Leinonen et al. 2005). It can therefore be understood that reduction in conflicts raises virtual team effectiveness.

2.6 Leadership

Leadership is a challenging aspect of a virtual team as the VT managers are often constrained in terms of not having a real picture of the events in front of them (Carmel, 2002; Joinson, 2002). Absence of a visual feedback can often make things more challenging for VT leadership. Team leadership helps in guarding the team against potential troubles (Gaudes et al. 2007). Feedback from the team leader boosts team spirit (Furst et al. 2004) and motivates team members (Leinonen et al. 2005). Hence, effective leadership is deemed to improve virtual team efficiency.

3. Research Methodology

This section explains the theoretical concepts and the intended primary data collection approach for this research.

3.1 Research Framework

Great teams have a well developed Transactive Memory System (TMS) (Hsu et al. 2012): “A TMS refers to a specialized division of cognitive labor that develops within a team with respect to the encoding, storage, and retrieval of knowledge from different domains” (Wegner, 1987 cited in Choi et al. 2010, pg. 856). A TMS is important for a virtual team as it refers to how the team stores, retrieves and applies knowledge and it directly impacts team performance (Choi et al. 2010). TMS increases team performance under certain circumstances.

The researcher believes that an effective TMS is an antecedent condition to good team performance in the later stages. A TMS is comprised of three major components:

“Specialization”: Specialization is achieved through selection of team members with the right set of skills for a task. This creates a team of experts and leads to a sense of satisfaction in the team members. Satisfied team members exhibit a greater degree of commitment towards the task and this boosts the overall team performance (Curseu et al. 2008; Lin et al. 2008; Shachaf, 2008).

“Co-ordination”: Co-ordination is understood as team members working together on a common project and agreeing to what they are building, performing and sharing amongst themselves (Kraut & Streeter, 1995). Co-ordination has two major components: team cohesion and communication. Team cohesion (Sivunen & Valo, 2006) creates an effective and responsive team as the team members can collectively work towards the task and can seek each other’s expertise and skills when needed. Effective communication, the second component of co-ordination, is highly desired in a VT and it heavily depends on the communication tool. Together with team cohesion, communication leads to co-ordination in a
VT; a synergy which is much desired due to time zone and cultural differences prevalent in VTs.

“Credibility”: Credibility is ensured with specialization and co-ordination in teams. Credible teams have a number of advantages: enhanced trust, reduced miscommunication, increased mutual understanding and good team performance. Team members exhibit a greater commitment towards the task in hand and understand the situation well. Team members are aware of each other’s skills and effectively collaborate to achieve the task.

3.2 Research Model

Transactive Memory System and VT dynamics are co-related to each other.

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<tr>
<th>Transactive Memory System</th>
<th>Virtual Team Dynamics</th>
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<td>Specialization</td>
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*Table 1: Correlation between Transactive Memory System and VT dynamics*

A positive effect on VT dynamics is deemed to create an effective TMS for the virtual team. TMS is directly impacted by the communication technology because frequent communication has an ability to encourage the development of the TMS (Kanawattanachai & Yoo, 2007). Feedback from leadership is echoed in previous literature (Choi et al. 2010) as another important factor that affects the development of TMS. A good feedback improves the TMS of a team. Preliminary research (Bastida et al. 2013) indicates that social media has a potential to improve virtual team trust, satisfaction and ensure a greater commitment towards the task. Going beyond the previous research, the researcher proposes his hypothesis as:

**H1: Social media can positively impact the TMS of a virtual team.**
3.3 Data Collection

Semi structured interviews (Myers & Newman, 2007) with virtual team members and managers across multiple organizations is hoped to provide the researcher with a detailed knowledge of the subject and add to his existing knowledge on virtual teams. The collected data would be analysed with the help of research model and the concepts from the relevant literature (Choi et al. 2010) and would uncover the factors related to the research questions. The researcher intends to rely on the principle of “theoretical saturation” (Eisenhardt, 1989) where the interviewing would commence once a determination is made that further interviewing will produce no new insight. Going further, the researcher intends to send out a set of Q-sort statements (Brown, 1996) that would be used to further analyze the knowledge gained through the interviews. For the same purpose, Q-methodology (Brown, 1980) would be employed to understand the subject in greater detail.

4. Implications and Conclusion

The proposed research attempts to provide an understanding of the Transactive Memory System of VTs by relying on existing theories (Wegner, 1987) and research (Bastida et al. 2013; Choi et al. 2010; Kanawattanachai & Yoo, 2007). Going beyond the existing research, this research attempts to highlight the effect of social media usage on virtual team dynamics and consequently, the effect on the TMS of the virtual team. Social media offers a different and highly collaborative environment (Goodwin-Jones, 2003) than email, videoconferencing and telephone and is thus expected to have a positive effect on the VT dynamics and TMS.

This research adds value to the TMS theory (Wegner, 1987) and conceptualizes the concept in the context of a virtual team. The future research work would test the hypothesis and validate the research model to provide a better understanding of a VT environment and empirically evaluate the effect of social media on the key virtual team dynamics.
References


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