When global virtual teams share knowledge: Media richness, cultural difference and language commonality

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ABSTRACT

Technological developments and internationalization have made virtual communication a central part of everyday life in many larger organizations. In recent years this trend has been intensified by travel-budget cuts imposed by the global financial crisis. Accordingly, the use of virtual media for internal knowledge sharing is now more important than ever before. Extant studies have provided useful theories and empirical documentation on how to manage global virtual teams. However, no prior research has examined the interaction of media type with the relation between culture/language and canonical/equivocal knowledge sharing. This is an important omission because cultural and linguistic variations are known to have a great effect on knowledge sharing. We use ethnographic field-study methodology for an exploratory examination of the effects of culture, shared language commonality and media choice on knowledge sharing in a large Danish MNC with particular focus on its Indian subsidiary. Results show that certain types of media are more useful for certain types of knowledge sharing depending on the cultural and linguistic variation between the communicating parties.

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1. Introduction

Globalization has dramatically increased multinational corporations' use of virtual teams as channel for organizational knowledge sharing (Baranek & Martz, 2005; Horwitz, Bravington, & Silvis, 2006). This development calls for studies that explore how key aspects of globalization, such as linguistic and cultural diversity, impact virtual teams' knowledge processes (Hardin, 2007; Martins, Gilson, & Maynard, 2004). Until now, the combined effects of language, culture and media on knowledge sharing in global virtual teams have remained understudied despite its relevance for the management of international organizations (cf. Shachaf, 2008). Thus, an exploratory study focusing on the role of media on intercultural/interlinguistic knowledge sharing in virtual teams would not only fill a void in the existing body of literature, but it would also address a key concern of multinational corporations. That is how to manage cultural and linguistic variation between organizational virtual team members. The subject has become even more important after the financial crisis because many companies report on drastic reductions in travel budgets and therefore use virtual teams more intensively than earlier (Badrinarayanan, 2008; Connaughton & Shuffler, 2007; Jenster & Steiler, 2011).

Virtual teams are based on individuals collaborating in geographically dispersed work groups and who may reside in different time zones and countries (Horwitz et al., 2006). While virtual teams with members distributed globally hold the promise of increased organizational flexibility and resource utilization, existing research suggests that it is more challenging to manage communication processes in such teams than in co-located teams (Fiol & O'Conner, 2005; Jarvenpaa & Leidner, 1999; Montoya-Weiss, Massey, & Song, 2001). This is primarily due to challenges inherent in communicating through what has been termed a lean media (e.g. e-mails). Such challenges can be misinterpretations of messages due to absence of body language and tone of voice and slow or missing feedback (Hayward, 2002). Accordingly, a number of researchers have argued that rich media communication (e.g. video conferences) is more suitable when sharing knowledge that is of a complex, equivocal nature (Daft, Lengel, & Trevino, 1987; Hayward, 2002; Kezsbom, 2000; Lengel & Daft, 1988). While these studies have given important insights into virtual team dynamics, they tend to neglect the cultural and linguistic aspects of virtual team collaboration. This could be an important omission since cultural and linguistic issues are at the heart of knowledge-sharing processes in global virtual teams. More importantly, including these dimensions might force us to rethink the relation between media and knowledge sharing as it is reflected in extant research.

The intersection between culture, language and knowledge sharing in virtual teams has only to a lesser extent been illuminated. The conceptual work in this evolving field indicates

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that the relation between media richness and knowledge-sharing effectiveness might not be straight forward (Jarvenpaa & Leidner, 1999; Stahl, Maznevski, Voght, & Jonsen, 2010). It is proposed that rich media is not always superior to lean media in an intercultural context. Rich media could lead to stereotyping and social boundary creation with a negative impact on knowledge sharing. Lean media, on the other hand, may reduce surface-level cultural cues and thereby down play cultural/linguistic differences in the team (Spears, Lea, & Postmes, 2001). This could suggest that lean media usage in global virtual teams might be more effective than in co-located teams for routine tasks or what has been termed canonical knowledge sharing. The same holds true for the impact of differences in language use on virtual knowledge sharing. Studies on co-located multicultural teams have shown that the degree of shared common language and variation in proficiency level has an important impact on team cohesiveness, team effectiveness and knowledge sharing (Lauring & Selmer, 2010, 2011, 2012). However, several researchers have argued that more empirical studies are needed to understand virtual communication in an intercultural context (Connaughton & Shuffler, 2007; Gibson & Gibbs, 2006). The aim of this study therefore is to empirically explore how variation in culture and language affects knowledge-sharing effectiveness in global virtual teams using lean and rich media. Included in the paper are a literature review, a method and an analysis section revealing results on the interaction between Indian and Danish team members in a Danish multinational corporation (MNC). Finally, the results are discussed in terms of their theoretical implications for further research and practical relevance for the management of virtual teams.

2. Literature review

2.1. Virtual communication

Studies suggest that managing communication and knowledge sharing in virtual teams is more challenging than in their face-to-face counterparts. This is due to lack of channel richness and to the delayed feedback inherent in some communication technologies (Distefano & Maznevski, 2000; Maznevski & Chudoba, 2000). Early studies on virtual teams have shown how media disrupt conversation patterns causing misinterpretation or misunderstanding. This supposedly makes communication effectiveness higher in face-to-face teams (see Maznevski, Davison, & Jonsen, 2006). Rich media, such as a videoconference, allows for backchanneling verbal and non-verbal signs of support or disagreement with a speaker's message (Hayward, 2002). Conversely, lean media, such as an e-mail, removes social presence cues and thereby a joint contextual background that may lead to communication breakdown. It has been suggested that various media can be placed on a continuum where is the lowest as it does not allow for physical presence and nonverbal cues, and face-to-face is the highest as it allows for both (Daft & Lengel, 1987; Daft et al., 1987).

Scholars have thus argued that complex and equivocal tasks in virtual teams necessitate a rich media (Maznevski & Chudoba, 2000). The assumption that rich media, such as video conferencing, enhances communication effectiveness has been challenged by the emergent field of global virtual teams. For as rich media enhances the verbal and non-verbal signs it also enhances the cues that team members use for social categorization shown to have a negative effect on intergroup communication (Carte & Chidambaram, 2004). It has therefore been suggested that lean media moderates negative team outcomes such as increased conflict and social fragmentation in an intercultural context (Stahl et al., 2010).

2.2. Sharing of equivocal and canonical knowledge

Media richness theory (MRT) proposes that team members engage in communication in order to reduce complexity about a given task and that media differ in their ability to handle multiple, conflicting interpretations of sent information (Daft & Lengel, 1987; Daft et al., 1987). MRT prescribes using rich media for complex, equivocal messages, while using leaner media for sharing simple and explicit or what is often termed canonical information (Barry & Fulmer, 2004). Equivocal messages could include information about questions that have no definite or clear answer or that are part of a discussion with different positions. Canonical messages could be the reporting of numbers or other types of unambiguous data. Equivocality, put differently, arises when a given task is open to varying interpretations and is imbedded in contextual knowledge, while canonical knowledge is less dependent on contextual cues (Gerybadze, 2004). The basic assumption of MRT is that the richer the media is, the more cues on a given task will be provided, and the more equivocality will be reduced. Studies have shown that virtual team members tend to use rich media, such as telephone or video conferences for equivocal knowledge and lean media, such as e-mails for canonical knowledge (Majchrzak, Rice, King, Malhotra, & Sulin, 2000). The important question to answer is how this is affected by the differences in culture and language inherent in global virtual teams.

2.3. Culture

In recent years, a number of authors have expressed critique of simple models for understanding cultural differences (Brannen & Salk, 2000; Weisinger & Salipante, 2000). Cultural difference, however, can easily be registered and the concept is useful for understanding problems in multicultural settings (Brett, Behfar, & Kern, 2006). The term cultural difference is constructed to describe the dissimilarities in basic aspects of culture, such as core values, beliefs, customs and rituals, as well as legal, political and economic systems (Adler, 2008; Hofstede, 1991; Shenkar, 2001). Cultural difference is generally perceived to represent a challenge to communication effectiveness and knowledge sharing in general and in particular to the exchange of complex ideas and notions (Gibson & Gibbs, 2006; Maznevski et al., 2006; Stahl et al., 2010). Studies in co-located teams have however shown that cultural differences may sometimes affect knowledge sharing positively since the intercultural encounter makes the contextual and tacit knowledge more explicit (Dougherty, 1992; Earley & Mosakowski, 2000). In this respect it is of importance to distinguish between the sharing of equivocal and canonical knowledge, respectively. The combination of a rich media and complex, ambivalent knowledge to be shared and debated is likely to be beneficial (Treviño, Webster, & Stein, 2000). This is even more important in situations where cultural differences between team members are outspoken because more detailed communication may be necessary in order to reach understanding across cultural divides. Moreover, is seems plausible that a rich media paired with canonical knowledge could provide an unnecessary excess of cultural cues hampering understanding. Hence, we may speculate that a lean media will be more effective for sharing of canonical knowledge in teams with great cultural differences among team members. This is depicted in the matrix of Table 1.

2.4. Language

A different variable to be examined is commonality in the shared language. Language has often been called the 'forgotten