Knowledge Transfer and Sharing in Globally Distributed Teams

Ilan Oshri
Erasmus University, The Netherlands

Julia Kotlarsky
University of Warwick, UK

Paul C. van Fenema
Netherlands Defense Academy, The Netherlands

INTRODUCTION

Recent years have witnessed the globalisation of many industries. Consequently, globally distributed and virtual teams have become increasingly common in many areas, for example, in new product development and information systems (IS) development. Achieving successful collaborations has become a key challenge for globally distributed organizations, and it is largely dependent on teams' ability to transfer and share knowledge.

Knowledge transfer is the process through which one organization (or unit) identifies and learns specific knowledge that resides in another organization (or unit), and re-applies this knowledge in other contexts (Hansen et al., 1999). On the individual level, Cutler (1989) has previously observed that knowledge transfer is indeed a process by which the knowledge of one actor is acquired and is reapplied by another. There have been numerous studies on knowledge transfer in various contexts (e.g., co-located teams, virtual teams), exploring the factors involved, and their impact on individual and team performance. It is commonly recognized that knowledge transfer is important for both team and product success. In this article, the concept of knowledge transfer in globally distributed teams will be explored. First, some definitions of the key concepts discussed here will be provided and a review of the relevant literature will be presented. Following this, a discussion of the processes, contexts, mechanisms and challenges involved in knowledge transfer in globally distributed teams will be developed. Lastly, the potential for future research in this area will be explored and conclusions will be offered.

BACKGROUND

Knowledge transfer is the process through which one organization unit identifies, learns and (re)applies routines in a specific area from another organization or organizational unit. The transfer of knowledge between teams and individuals is important in both co-located and distributed contexts (Hendriks, 1999). The ability to share knowledge through knowledge transfer processes, for example, is important to building trust and improving the effectiveness of group work (Storck, 2000). Others have claimed that without an effective sharing of information, projects might suffer from coordination problems, leading to unsuccessful collaborations (Herbsleb & Moitra, 2001).

Nonetheless, achieving an effective knowledge transfer process may encounter certain challenges, in particular when teams are faced with cultural, geographical and time zone differences such as in globally distributed teams. In comparison to co-located teams, globally distributed teams are faced with additional challenges when attempting to transfer and share knowledge between remote sites. Globally distributed teams are broadly defined as two or more teams working together to accomplish project goals from different geographical locations. One key area that has attracted attention from both academics and practitioners when considering knowledge transfer between globally distributed teams is the organizational mechanisms through which knowledge can be best shared between remote sites. In particular, the literature has emphasized the use of certain collaborative technologies such as e-mail, chat (instant messaging), phone/teleconferencing, video-conferencing, intranet, group calendar, discussion lists and electronic meeting systems (Herbsleb & Mockus,

2003) as critical for knowledge transfer. Others have highlighted the importance of face-to-face meetings for knowledge transfer in globally distributed teams (Kotlarsky & Oshri, 2005). In this regard, it has been suggested that some collaborative technologies, such as GroupWare, do not provide the richness needed to capture and share knowledge that is tacit and contextual in nature. Indeed, the transfer of knowledge may encounter challenges because of the different images of knowledge involved in this process. By this, we mean that knowledge transfer may be seen as a process that involves generic, accessible and codifiable knowledge in which the role of collaborative technologies is central in the transfer process, as well as knowledge transfer that concerns embedded, non-codifiable and contextual knowledge, which may require face-to-face meetings to support the sharing of knowledge. These two views of knowledge transfer will be discussed in detail in the following sections.

MAIN FOCUS OF THE ARTICLE

Globally Distributed Teams

Globally distributed teams—both within and between organizational boundaries—represent a new organizational form that has emerged in conjunction with the globalization of socio-economic processes. Such teams have replaced the traditional single-site hierarchy and the functional department structure, for various reasons. For example, companies in developed nations have outsourced parts of their IT services and business processes to developing nations (Carmel & Agarwal, 2002). In addition, short-cycle development and the launch of new products and software for global markets has required expertise from a range of geographical areas (Desouza & Evaristo, 2004). Following this trend, the transfer of knowledge has become a key challenge for global teams attempting to deliver products and services adjusted to local markets and yet aiming to standardize expertise and business and technological operations on an international scale (Sole & Edmondson, 2002). Indeed, the growing trend of outsourcing, for example, has increased the exchange of information and knowledge between knowledge workers located offshore and onsite during different stages of product development. In this regard, the transfer of knowledge has become a significant factor in supporting successful collaboration between remote teams.

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Knowledge Transfer and Sharing in Globally Distributed Teams: The Challenges

While the literature has so far provided various explanations as to how knowledge is shared between individuals, for example, through knowledge codification and socialization processes (Nonaka, 1994), several studies have expressed concern with regard to the transferability of knowledge between remote counterparts and dispersed teams, prompted by a number of factors. First, the diversity of local contexts may exacerbate the stickiness of information (von Hippel, 1994), hampering the transfer of contextual knowledge between remote sites (Cramton, 2001). Second, remote counterparts often adopt unique local routines for working, training and learning (Desouza & Evaristo, 2004). These unique routines may obstruct the development of shared understanding of practices and knowledge across remote sites. Third, differences in skills, expertise, technical infrastructure and development tools and also methodologies further raise the barriers to knowledge transfer between remote sites. And finally, time-zone differences reduce the window for real time interactions (Boland & Citurs, 2001), thus limiting opportunities for remote team members to discuss, debate and explain conflicting opinions and perspectives. Indeed, while co-located teams may develop various memory systems that support the transfer of both codified and contextual knowledge, globally distributed teams often face challenges in developing such memory systems that may provide support for the transfer of contextual and embedded knowledge. The following sections discuss the collaborative tools and social aspects involved in supporting knowledge transfer between globally distributed teams.

Collaborative Technologies for Knowledge Transfer

Several tools and technologies have been suggested to overcome knowledge transfer challenges in globally distributed teams. It has been argued that a powerful ICT infrastructure may allow the transfer of data at high speed. Indeed, a reliable and high bandwidth ICT infrastructure is required to ensure connectivity between remote sites (Carmel, 1999; van Fenema, 2002). The most commonly suggested collaborative technologies are shown in Table 1.

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