ABSTRACT

The study investigates the power and potentials of face to face (F-2-F) conversation as a medium of knowledge exchange among software engineers in the context of a high-tech laboratory of a Fortune 100 corporation. This research is based on a qualitative case study design. A number of reasons underlying the preference for F-2-F interaction to transfer knowledge are identified. The analysis also provides evidence that software engineers also face difficulties in using F-2-F conversation as a medium of knowledge exchange. Such findings may be useful to managers and practitioners as the paper proposes an integrated approach where an organization can use both F-2-F and computer-mediated mechanisms simultaneously in a balanced manner.

Keywords: Computer-Mediated, Face-to-Face Conversation, Information Technology, Knowledge Exchange, Software Development

INTRODUCTION

The transfer of knowledge has become crucial for a high-tech firm’s survival and strength since organizational knowledge is regarded as a strategic resource (Zhang & Jasimuddin, 2008; Jasimuddin, 2005). Software engineers can use a variety of mechanisms including face-to-face interaction and computer-mediated systems to support their software development activities. While much has been written about the potentials of computer driven technologies as a medium of knowledge transfer (Walther, Slovacek, & Tidwell, 2001; Tidwell, & Walther, 2002; Keong & Al-Hawamdeh, 2002; Warkentin, Sayeed, & Hightower, 1997; Walther, Loh, & Granka, 2005), little attention has focused on the effectiveness of face-to-face (F-2-F) conversation as a medium. The paper attempts to address the question of why people (e.g., software engineers) perceive F-2-F conversation as an effective medium of knowledge transfer. However, few scholars (e.g., Kraut, Galegher, & Egido, 1988; Daft, Lengel, & Trevino, 1987; Olivera, 2000; Hislop, 2005) contend that F-2-F interaction is the most effective mechanism of knowledge transfer, without explaining much on the rationale behind its popularity.

This paper intends to fill this gap by exploring the strength and weaknesses of F-2-F interaction as a medium of knowledge exchange, conducting a research in a high-tech global corporation. The paper is organized as follows. First, it briefly highlights previous research on...
in computer aided and F-2-F mechanisms of knowledge transfer. Then it discusses the research methodology of the study. The strengths of F-2-F conversation are elaborated along with its weaknesses. Finally, based on empirical results, we derive managerial implications and suggestions for future research.

LITERATURE REVIEW

The knowledge transfer mechanism is the means by which knowledge is transmitted within and between organizations. Scholars, such as Hansen, Nohria, and Tierney (1999), and Jasimuddin and Zhang (2009), focus on the mechanisms and their influence on the knowledge transfer process. Broadly speaking, knowledge transfer in organizations can take place in two different ways: F-2-F and computer-mediated communication channels.

Martiny (1993) suggests that computer-mediated mechanism is an enabler rather than a driver of knowledge transfer efforts. Nandhakumar (1999) contends that computer-mediated mechanism has limited ability to facilitate a rich form of communication. In this regard, Daft and Lengel (1986) argue that F-2-F mechanism of knowledge transfer has the highest information richness. Most specifically, F-2-F contact is more suitable for the transfer of tacit knowledge. Lucas (2005) supports this, stating that while advances in computer-mediated systems have accelerated knowledge transfer, they can not replace personal interactions and the associated benefits through F-2-F conversation. Tone of voice, facial expression and gestures are missing in computer-mediated communication (Cramton, 2002). In this regard, Storper and Venables (2004) suggest that F-2-F conversation will remain central, despite the astonishing rise in the complexity and variety of information – verbal, visual, and symbolic- which can be communicated near instantly using technology.

While F-2-F communication is thought to have extinction in the digitizing world, such contacts still remain important (Winger, 2005). Because trust starts lower in computer-mediated group but increases to levels comparable to those in F-2-F group over time (Wilson, Straus, & McEvily, 2006). Parallel to this, Weisband (1992) argues that computer-mediated team can take up to four times as long to transfer the same amount of messages as F-2-F team. Against this backdrop, the paper intends to explore the benefits and pitfalls of F-2-F contact, deriving evidence from a high-tech laboratory of a Fortune 100 corporation. And the computer engineers of the lab interact with their team (or project) members who are based in other parts of the world. The kind of knowledge with which the paper is concerned can be referred to as technological knowledge, be it tacit or explicit, that helps software engineers to accomplish their assigned tasks (e.g., software development).

RESEARCH METHODOLOGY

This section addresses the reasons behind the employment of the case study approach. The section also incorporates a description of the research design that covers the selection of the research site, and also a discussion of the methods of data collection and data analysis procedures based on Miles and Huberman’s (1984) approach.

1. Research Method: This research was carried out as an exploratory case study. This allowed to observe the phenomenon in a natural setting and to engage in theory-improvement. A case study approach was chosen for this research, which fulfills Yin’s (2003) conditions:-

   a. Firstly, Yin (1984) argues that the case study approach is useful when the research explores key issues of the social phenomena. Parallel to this, the nature of the present study is to explore the power and potentials of F-2-F interface in knowledge transfer.

   b. Secondly, Yin (1984) also contends that case study is appropriate when the focus of the research is on contemporary events. The study of
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