Chapter 5.15

Managing the Information Technology:
Knowledge Transfer in Virtual Teams

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ABSTRACT

The main points of this chapter are probing for the combination of information technology and virtual work, and how to change the distribution of different types of knowledge across individuals, teams, and even the organization. The discussion in the chapter will assess the dynamics between the individual, the organization, and information technology in the context of teams that vary in their virtualness. Information technology can make convenient spread of knowledge across the organization; even the point of making virtual teams a viable alternative to face-to-face work. However, unless managed, information technology may destabilize the relationship between organizations and their employees when it comes to the transform of knowledge. Therefore, this chapter advances theory and informs practice by illustrating the dynamics of knowledge development and transfer in more and less virtual teams.

INTRODUCTION

The rapid proliferation of the Internet and information technology has dramatically increased the speed of knowledge creation and information distribution. As a result, the global business has entered a new era of the knowledge ecology, in which knowledge has become the driving force for productivity improvement and economic growth.

The knowledge ecology, which treats knowledge as a valuable asset in economic development, has changed industrial structures and business operations. On the one hand, the Internet has changed the nature of the supply chain, and creates significant needs for electronic markets. Electronic commerce has become the most popular business function and almost a necessity for service-oriented enterprises. On the other hand, traditional industries are facing a great pressure to reengineer and digitize their information process in order to survive.

With this understanding, it is natural that many researchers have devoted their effort to investigat-

ing this new global trend of applying information technologies to facilitate the development of knowledge ecology. Even after the burst of the Internet bubble, intellectual capital (IC) management in businesses is still a central theme for research and practical applications. In fact, it is only until the bubble burst that managers made a closer examination of what is the real value of managing intellectual capital for business and economics.

Academic research also helps in building fundamental theory from the observed phenomena, and suggests a better use of the knowledge technology transfer. Thus, intellectual capital (IC) of a business's knowledge technology transfer has been a very critical issue within this research field. Intellectual capital (IC) is also commonly accepted as the basis for knowledge technology learning for organization.

Teams and knowledge management are two areas that are often providing increased value when carefully managed. Teams can increase capability, flexibility, and responsiveness (Leavitt, 1996), while knowledge management is believed to be crucial to organizational performance (Berman, Down, & Hill, 2002; Kogut & Zander, 1992; Liebeskind, 1996).

Technology may provide a means of structuring teamwork, enhance the information available to the team, and/or provide a communication system (McGrath & Berdahl, 1998). The growth of virtual teams in organizations is the example on which we will focus here. Organizations can form teams regardless of the physical location of the members, providing further opportunity and flexibility in building the best teams (Griffith & Neale, 2001). Organizations can also take advantage of the ability of such virtual teams.

Modern organizational teams have access to a variety of communication and work process technologies. More and less virtual teams use technology in ways that capture more and less knowledge for the organization. More virtual teams seem to use technology to do their work as

a matter of course, passively collecting knowledge and perhaps sidestepping many of the motivational problems of knowledge management (e.g., Goodman & Darr, 1998) found in more traditional settings. Equivalent levels of knowledge capture in less virtual teams might require added work. The added work, even the straightforward task of documentation, may cause such efforts to fail, regardless of the benefit of knowledge management (Goodman & Darr, 1998; Majchrzak, Rice, King, Malhotra, & Ba, 2000).

There may also be negative effects related to virtual teams and knowledge. If the perspective is that of increasing value to the organization, our analysis seems to suggest that the use of more virtual teams provides an opportunity for knowledge capture to occur at a low marginal cost. However, individuals who hold this knowledge to be captured may experience a considerable loss, even as the organization gains.

The organization possibly forms the virtual team, no matter member's physical location, creation opportunity, and flexibility (e.g., Griffith & Neale, 2001). The modern organization virtual team can work by various communications. Originally belongs to the virtual network imagination, the man-machine surface is mutually dependent, and it creates the virtual team culture. That is, this report attempts to inspect the knowledge transfer in virtual team, and some discussion subjects are proposed.

Studies mainly lie in the discussion of the knowledge types in virtual team, and on the different stratification plane evolution in knowledge transfer. The establishment in research model will transform the tacit knowledge in virtual team for explicit knowledge.

To take full advantage of the virtual team knowledge management, we need to understand the experts' view in literature, using deductive research method to discuss knowledge types and the team organization relations in detail.

The discussion below will assess the dynamics between the individual, the organization, and

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