Chapter 1.8
A Knowledge Management Approach to Improving E-Business Collaboration

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INTRODUCTION

Information and communication technology (ICT) helps to remove barriers and improve mechanisms that support e-business. E-business involves collaborative systems that enable trading partners to work together as members of communities of practice. This article argues that the ICT components of e-business are necessary to support communication but in themselves are often insufficient as enablers of collaboration. A knowledge management orientation is taken to viewing the dyad between human ability, organisational need, and the extent to which electronic information systems can mediate between them. Concepts from the social practice literature are identified that may contribute to addressing the gap between generic technology and situated business applications, which may inform human resource strategy.

BACKGROUND

The communication of information is a key factor affecting the efficiency of business transactions. ICT provides mechanisms to support the accurate and timely communication of information across organisations in the supply chain. E-business involves the use of interfirm computer networks to exchange information that supports business applications or processes (Li & Williams, 1999). It extends beyond e-commerce, the buying and selling of goods and services on the Internet, to incorporate the entire supply chain (Martin, 1999). Organisations can benefit from cooperating within the supply chain. Benefits of cooperation may include improvements in customer service (Tan, 2001), understanding future product demand (Sahay, 2003), transaction costs, and time to market (Graham & Hardaker, 2000).

Supply chain management requires collaboration between trading partners (Sahay, 2003) which can take many forms requiring different degrees of cooperation and commitment (Cox, Krasniewicz, Perkins, & Cox, 2006). John-Steiner, Weber, and Minnis (1998) emphasise the need for multiple definitions and models of collaborative practice. The term 'collaboration' can offer positive connotations meaning 'to work together, especially in a joint intellectual effort' (www.yourdictionary.com). This view of collaboration is socially situated, implying that the partners in the collaborative relationship share agreed goals and that the balance of power, control, and potential benefits are equal in the relationship. However, the term can also have negative connotations as in 'to cooperate treasonably, as with an enemy occupation force in one's country.' The term 'cooperate' can be defined as 'to work together toward a common purpose' or 'to form an association for common, usually economic, benefit.' This relates to the 'working together' aspect of collaboration. However, a further definition of cooperation is 'to acquiesce willingly; be compliant.' This demonstrates the key difference between cooperation and collaboration; cooperation can imply deference and subservience in the relationship.

Technology provides the means to communicate data and information and integrate processes within the value chain. Value is added to collaborative relationships in e-business through the information exchanged which allows knowledge to be shared for joint benefit, changing processes and developing new products (O'Toole, 2003). Knowledge can be defined as a combination of contextual information that is produced through synthesis of information and reflection from experience (Davenport, DeLong, & Beers, 1998). Nonaka and Takeuchi's (1995) model of knowledge conversion modes established explicit and tacit dimensions of knowledge into current knowledge management thinking (Grover & Davenport, 2001). Explicit knowledge is often found in the form of information; it is the component of knowledge that can be expressed with textual or symbolic representation. Tacit knowledge is more subjective and difficult to express and codify. Communication and cooperation using collaborative systems lead to reciprocal dependency of knowledge sharing which is highly dependant upon the establishment of trust between trading partners.

The study of practice within communities of practitioners is necessary to determine the cultural rules that underpin routine practice and establish knowledge requirements. An approach emerging from the domains of social sciences and organisation studies is that of social practice theory. This focuses on the study of organisational culture through the medium of the work practices that comprise and result from it (Engestrőm, 2001). Engestrőm's model of socially distributed activity systems explores the dynamics between the users of collaborative systems, objects of activity (such as trading processes), and the community within which this trading takes place; it then analyses how these elements are mediated by implicit or explicit rules, roles, and technology.

E-BUSINESS COLLABORATION

ICT changes the way work is conducted including how people work together and the degree to which they need to (Pearlson & Saunders, 2004). Internet technologies are the major enabler of improvements in supply chain management (Kirchmer, 2004) enabling customers and suppliers to work together towards a common aim to the benefit of both parties, for example, reducing transaction costs.

Ward, Griffiths, and Whitmore (1996) identify four levels of using technology to support interorganisational cooperation and strengthen intercompany relationships. At the lowest level of connectivity, batches of transaction data are transmitted between partners. This requires commitment to send accurate and timely data in

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