Chapter III

Challenges for Managing IT Skills Portfolio for E-Business

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Abstract

Organizations are under increasing pressure to adopt Internet-based e-business solutions for improving internal efficiency and collaboration with partners, suppliers, and customer firms within the environment of e-business webs. To realize these benefits, companies must transition towards an e-business organization. Such transformation demands IT knowledge and expertise at different levels. Each level requires special IT skills introduced as a result of the complex and dynamic nature of an e-business environment. In this chapter we examine the e-business environment and its implications for firm-level IT skills portfolio management. We then present five levels of challenges related to an e-

business firm's IT skills requirement. We further present: (1) future trends relating to the changing landscape for e-business IT skills; (2) activities that support acquisition, development, and maintenance of these skills; and (3) the gap between academic programs and e-business needs. In conclusion, we propose a research agenda.

Introduction

In spite of recent economic slow down and dot-com failure, e-business continues to grow at a consistent rate. A 2002 projection by Forrester Research forecasts online retailing to grow at a cumulative annual growth rate of 25% to reach a sales volume of $217.8 billion by 2007 (Hirsh, 2002). Recent estimates of B2B transactions for 2003 stand close to $2.4 trillion, nearly doubling the 1999 Forester Research projection of $1.3 trillion by 2003 (Mullaney et al., 2003). In Europe, B2B e-commerce transactions have grown at an annual rate of 100%, reaching $200 billion in 2002, a fourfold increase from B2B transactions in 2000 (Reinhardt & Majidi, 2003). In China, the number of Internet users is expected to increase 1,184% by 2006 (Vinas, 2002). These figures affirm the continued growth of the Internet and e-business.

Global corporate adoption of Internet-based initiatives has accelerated the movement towards a tighter collaboration among companies along the industry value chains. By implementing integrated enterprise systems, partner firms aim to improve the quality of services and products, and the speed of market entry and penetration. These types of business relationships, established mainly for the improved customer experience, are called e-business webs (Kalakota & Robinson, 2001; Tapscott, Ticoll, & Lowy, 2000). The impact of the Internet has expanded from the initial phase of transaction-based e-commerce, to firm-based integration of Internet strategies, to industry-wide collaboration. Such transformation demands firms to undertake different approaches to managing information technology (IT) services and human resources.

Rapid advancement of information technology further complicates the difficulty of managing IT personnel. Researchers have advocated an IT skills portfolio approach to managing a firm's IT skills and developing appropriate strategies for meeting its changing needs (Nakayama & Sutcliffe, 2001). For companies transitioning towards an e-business environment, IT skills portfolio manage-

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