

# Chapter 6.16

## Staffing

### Electronic Commerce Projects: Framework for Developing Appropriate Skill Sets

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#### **ABSTRACT**

Electronic commerce (e-commerce) personnel are instrumental in developing and maintaining electronic commerce programs and projects within firms. In spite of the dot-com bust, the number of firms developing and using e-commerce for interactions with customers and suppliers is growing. Personnel competence as individuals and as a group can be a decisive force in determining the level of success of e-commerce projects. In this chapter, we present a conceptual framework as an extension and reformulation of several of the currently active fit theories of human resource management and industrial psychology. We propose consideration of five categories of skills that should be present in organizational e-commerce workforce (human computer interface, data storage and analysis, transaction/application develop-

ment, infrastructure, and project management). Finally, based on the adjusted concepts of fit, we present a set of propositions showing expected relationships between organizational and fit related variables on workforce outcomes.

#### **INTRODUCTION**

Internet, since its launch in 1972, has significantly changed the world. It connects hundreds of thousands of different networks from over 200 countries around the world. Millions of people working in science, education, government, and business professions utilize the Internet to exchange information or perform business transactions around the globe. According to NUA Internet Surveys (2002), the number of Internet users has surpassed 605.6 million as of September 2002. The Internet

has penetrated to people's everyday life, altered the way companies do business, created new services and jobs, and changed the way people work. Using Internet technology, companies often find new outlets for their products and services abroad (Quelch & Klein, 1996) by linking directly to suppliers, business partners, and customers. Despite the recent collapse of dot-com startups and the Wall Street re-valuation of technology stocks, the Internet has undoubtedly emerged as a crucial communications technology in the information era. This has led to penetration of Internet by "clicks and mortar" companies with both Web and traditional presence.

However, the transition from traditional to "click and mortar" firm is not always smooth and easy. We frequently observe in the trade literature that e-commerce projects have gone awry. Burke and Morrison (2001) have documented the mechanics of how this happens. Organizations have a tendency to vastly underestimate the difficulty in shifting from a static Web page that serves basically as an automated brochure to a dynamic Web program that provides online information exchange and facilitates real-time transactions. As technologies support more sophisticated Web activities, the demand for knowledge and skills of the e-commerce personnel supporting e-commerce programs expands correspondingly. It is logical to propose that a key success factor for the development and implementation of e-commerce applications is the technical and organizational competence of the e-commerce personnel to which the project is assigned. It is, therefore, of significant importance for e-commerce projects' managers to bring the greatest possible understanding of the dynamics affecting productivity to their personnel decisions.

This chapter has three objectives. First, we intend to present our conceptual framework as an extension and reformulation of several currently active fit theories in the fields of human resource management and industrial psychology. Second we intend to take an in-depth look at the IT skills

set, which should be expected to be present in the organizational e-commerce workforce. Finally, based on the adjusted concepts of fit, we present a set of propositions demonstrating expected relationships among the framework components.

## **LITERATURE REVIEW**

### **Fit Theories**

For generations, management and industrial psychology researchers have been studying issues of employee outcomes including "performance, motivation, extra-role behaviors, work attitudes, retention, group cooperation, and group performance" (Werbel & Gilliland, 1999, p. 209). One major direction of that research focuses on the validation of a belief that the fit between the work environment (in a variety of aspects) and the attributes of the individual should predict various work-related and individual outcomes. Where the match is close, the outcomes should be better than where there is a significant gap between individual and organization (e.g., Edwards, 1991, 1996; Kristof, 1996; Livingstone, Nelson, & Barr, 1997; Werbel & Gilliland, 1999). For example, a skill element of a taxi driver's job is to drive efficiently from place to place. Individuals with a high level of skill at "finding shortcuts" should be more productive than those without the skill. However, as the nature of work changes significantly in response to the growing prevalence of information technology, which helps organization reorganize, replace, and invent new work, the simple match between job requirements and individual skills could only explain part of the variance in outcomes.

A number of additional matches have been proposed to supplement the job environment, such as individual attribute match. For example one study focusing on the employee selection process proposes three fits that are important in influencing outcomes. Werbel and Gilliland (1999)

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