



Chapter 12

A Model of the Motivation for IT Retraining

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The skill-sets of many information technology (IT) professionals are becoming obsolete as IT changes accelerate. Organizations are retraining many software developers with legacy systems skills to skills required in the new Internet-based, client-server and object-oriented paradigms. This type of retraining is not incremental, but entails major cognitive, methodological and procedural shifts. Given its importance, cost, and currency, processes that impact the effectiveness of training should be considered. Trainee motivation is one such process that should be investigated because it is more malleable than other aspects, such as trainees' cognitive ability. This chapter proposes a model of motivational intentions and antecedents in this information technology retraining context. Theoretical background for the model is described. In addition, the implications of the model and its potential utilization in influencing motivational intentions, and ultimately improving retraining outcomes, is discussed.

Advances in information technology are providing organizations with exciting new opportunities. Organizations today can expand their market reach through globalized networks, augment their product lines with knowledge-based products and services, and use more agile organizational structures such as virtual teams. Yet, to leverage these new opportunities, firms are finding that they are requiring new and different skills from their information technology professionals. Most staffs are skilled in legacy systems application development, but are not versed in newer technologies (Chabrow, 1995; King, 1997). Because of the tremendous technological transitions, companies with in-house IT professionals are increasingly finding their skills obsolete (Gottlieb, 1993). Many companies, therefore, are retraining existing employees with skills that are appropriate for this new computing environment.

Because of the increased requirement for retraining due to technical advances and other

environmental factors, it is now more critical than ever that researchers examine the underlying processes that determine the effectiveness of IT retraining. Trainee motivation is one such process. Maier (1973) has maintained that training performance will most likely be poor if motivation is low, even if individuals possess the requisite ability to learn the content that is presented. Recently, researchers have focused on pretraining motivation because of the belief that, at least compared with general cognitive ability, motivation is more subject to marked change (Wlodkowski, 1985).

This chapter proposes a model of the individual motivation to retrain in IT, casting it as an intentional process, and specifying the antecedents of retraining intentions. This is an extension to prior research in several ways. First, this research specifically investigates *retraining*. That is, the training of employees whose current jobs, knowledge and skills have begun to become obsolete and will require significant, rather than incremental, change. The proposed model of motivation in this retraining context highlights salient antecedents that are proposed to be more intense than in a training environment in which the targeted skills to be acquired are incremental in nature. Next, this research specifically addresses the IT professional. Previous research concerning IT training and motivation has primarily concentrated on the end-user (e.g., Igarria et al., 1996). However, in today's dynamic environment where technologies are rapidly changing, focus must also be given to the retraining of IT professionals. This research helps to fill the existing void. Finally, this chapter proposes a theoretical basis for further investigation of IT retraining. Many researchers have argued that much IS research lacks theoretical grounding (Lucas, 1991; Jarvenpaa et al., 1985). As suggested by Lucas (1991), this chapter draws upon existing studies from the information systems literature, as well as the reference disciplines of organizational behavior and human resource management.

This chapter will first investigate skill obsolescence issues. Second, prior research on the motivation to retrain will be reviewed. Third, the proposed model of motivation intention to retrain and its antecedents will be presented and discussed in an IT context.

SKILL OBSOLESCENCE

For many years, the IT environment was centered around the mainframe. As organizations are shifting to newer, more flexible technologies, such as Internet-based technologies, client/server and object-orientation, they are finding that their developers' skills are not sufficient to meet changing demands. For example, Chabrow (1995) indicates that only 30% to 50% of the applications developers in the U.S. possess the requisite client-server skills. Yet, industry surveys have shown that 75% of new multi-user applications are predicted to run on client/server platforms by 1999 (King, 1997).

This type of technological obsolescence is a key human resource (HR) dilemma (Gist et al., 1988). Fossum et al. (1986) define obsolescence as occurring "when the person requirements of a job which are demanded by its duties and responsibilities become incongruent with the stock of knowledge, skills and abilities currently possessed by the individual." In the context of the shift in software development from legacy systems to that of Internet-based, client/server and/or object-oriented, software developers are finding that the job requirements, and the requisite skills for essential job functioning, have indeed shifted. To implement technologically current systems, organizations must either retrain existing IT personnel or hire new IT professionals.

The human resource issues surrounding this staffing dilemma are complex. However,

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