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Chapter IV

The Effectiveness of Online Task Support vs. Instructor-Led Training

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Abstract

This study investigates the effectiveness of online task support (the wizard type in particular) relative to instructor-led training, and explores the underlying cognitive process in terms of the development of mental models. Ninety-two novice users of Microsoft Access were either trained by an experienced instructor or performed exercises with online task support, and then completed a variety of performance-based tests. Analysis shows that users of online task support tended to outperform instructor-trained individuals on high-level tasks, whereas the performance difference on low-level tasks was not significant. The cognitive processes underlying the difference are also noteworthy. Task support users were more likely to

develop conceptual mental models as opposed to procedural ones, which accounted for their better high-level performance. Mental model completeness was also found to be closely associated with performance on both low and high-level tasks. These findings offer support for increased use of online task support.

Introduction

End-user training is a multi-billion dollar business, critical to the successful implementation of systems and the productive use of technology (Compeau, Olfman, Sein, & Webster, 1995). However, spending is no guarantee for success. Traditional training approaches tend to remove trainees from the context of work, provide them with a loaded training program, and then send them back to their jobs. They run the risk of teaching material that would never be transferred to the actual job context. By providing all training in massed sessions, the knowledge acquired might deteriorate over time.

After an initial training, users tend to practice only those procedures that they need to accomplish their most urgent tasks. "As a result, much of what they were initially trained to do but did not continue to do regularly was forgotten" (Bullen & Bennett, 1996, p. 371). Occasional users in particular are not interested in regular training sessions, nor would they benefit from such training (Eason, 1988). According to Eason, what they really need is the "point of need support," which provides specific answers when questions arise from real work. A variety of mechanisms could be used to provide such types of support, including online help facilities.

Advances in information technologies have created both challenges and opportunities for end-user training. On one hand, learning everything in advance has become impossible, and it is difficult to be proficient with many applications or many functions of a single application. End-users must develop the ability of self-learning and support. On the other hand, online task support has become increasingly sophisticated and increased in variety including help and references, examples, wizards, cue cards, and custom-designed job aids. More importantly, online task support has emerged as a potential viable alternative to the conventional training, allowing training to be integrated into working.

The central idea of online task support is embedding training and support functions within an operational system, to enhance knowledge workers' performance by providing access to knowledge, information, advice, and learning experiences in the context of work (e.g., Gery, 1995; Marion, 2002; Masumian, 2000). In other words, online task support is provided to users within the context