

Chapter 6.11

Learning to Use IT in the Workplace: Mechanisms and Masters

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ABSTRACT

Fluency with information technology (IT), defined as “an ability [to use information technology] to express [oneself] creatively, to reformulate knowledge and to synthesize new information,” (Committee on Information Technology Literacy, 1999, p. ES-1), is an important concern for those who manage workers with jobs that require the use of IT. Training is one mechanism to build fluency, but research about “influential individuals” hints that other mechanisms might also play a role. This article presents an interpretive case study of junior-level knowledge workers at a management consulting firm. To learn to use the IT of their jobs, these workers relied not only on formal training, but also on on-the-job learning through experimentation; reading books, manuals, and online help; and social interaction with their peers. The researcher identified different types of “master users” who were indispensable for this learning to take place. The findings of this study suggest that managers and researchers interested in training users also devote attention

to these other mechanisms for learning, especially the “master user” phenomenon.

Fluency with information technology ... entails a process of lifelong learning in which individuals continually apply what they know to adapt to change and acquire more knowledge to be more effective at applying information technology to their work and personal lives. (Committee on Information Technology Literacy, 1999, p. ES1-2)

FLUENCY IN THE WORKPLACE

With the preponderance of information technology in our society and the growing importance of the Digital Divide (U.S. Department of Commerce, 2000), *fluency with IT*, defined as “an ability [to use information technology] to express [oneself] creatively, to reformulate knowledge and to synthesize new information”, has become an important concern for our society (Committee on Information Technology Literacy, 1999, p. ES-1). In particular, “[m]any (people) who currently

use information technology have only a limited understanding of the tools they use and a (probably correct) belief that they are underutilizing (sic) them” (p. ES-1). Thus, research directed at how people use information technology (IT) in their work and the process by which they learn to use it is valuable for those who manage workers with jobs that require the use of IT. The present research examines the use of IT by knowledge workers at one organization to understand how they become fluent with the information technologies of their work. In particular, the purpose of this research, a qualitative case study, is to determine the mechanisms these workers — management consultants at a global strategic management consulting firm — employ to use fluently the information technologies of their work. These management consultants, recent graduates from elite educational institutions, work in project teams to assist clients, Fortune 500 or Fortune 1000 companies, in determining the strategic direction of their firms.

In comparison with many studies about learning to use IT, this study examines mechanisms for learning that surpass formal, structured training. In particular, this study investigates ongoing learning of the information technologies workers have at their disposal, rather than the formal training devoted to use of a particular system. Additionally, this study uses intensive research methods to understand users in their natural work settings. By using intensive methods, the researcher was able to pursue a line of enquiry that has been disregarded in the literature, namely, the reliance of knowledge workers on mechanisms other than training for learning to use IT, that occur on-the-job, especially social interactions with master users. Furthermore, the researcher was able to probe into the “master user” phenomenon at the firm studied to identify categories of master users and to raise additional questions about the phenomenon.

PRIOR RESEARCH

Few studies concerned with an individual’s learning to use IT examine the learning that occurs after the initial training and implementation period, that is, the learning that occurs during ongoing use. The literature review below first covers the few studies devoted to learning IT during ongoing use, then briefly covers the studies devoted to first-time use.

Social Support and Training for Ongoing Use of IT

Some research indicates that users rely on a social support mechanism to improve their fluency with IT over time. For example, in their literature review, Orlikowski and her colleagues identified “influential individuals” who tend to be associated with ongoing use of IT: (1) *designated support staff* — those individuals who react to users’ problems and requests and (2) *translators, tailors, and local experts or gurus* — those individuals who do not hold IT positions but who do provide support for other users (Orlikowski, Yates, Okamura & Fujimoto, 1995, p. 425). Other researchers have found that individuals rely on others in their community to learn about IT. For example, users who developed a community of practice were more effective at integrating a new IT into their work than users who did not develop a community (George, Iacono & Kling, 1995). Another study shows that workers used a system to a greater degree when they believed that others in their work environment thought they should be using the system (Lucas & Spitler, 1999). In these studies, other people were important influences on individuals as they continued to use and build fluency with information technology after initial training and implementation.

Some users also benefit from training during ongoing use. For example, the three-tier IT training strategy used by a firm called SVF Corporation shows how SVF views training (and therefore

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