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Chapter VIII

Understanding the Role of Type Preferences in Fostering Technological Literacy

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Abstract

This chapter examines the relationship between learning preferences and technological literacy. Based upon the work of Carl Jung, Myers-Briggs proposed a framework for understanding personality differences. The chapter suggests that applying this framework to the study of technological and information literacy can increase organizational effectiveness, particularly with respect to training, delivery methods, and information and knowledge acquisition.

Background and Need

In today's knowledge economy, technology is the "lifeblood" of the organization (Paynich, 2003). No longer is technology confined to specific occupations or sections (Pont & Werguin, 2001). Organizations that wish to thrive in the knowledge economy

must assure that all employees know how to process and understand information. Computer literacy is the second most sought after skill (Moody, Stewart, & Bolt-Lee, 2002) by recruiters, second only to written and oral communication skills. Core skills now include not only cognitive skills, but also the ability to handle information and use computer technology effectively (Pont & Werguin, 2001).

The use of computers has become so prevalent that many managers assume they have a technologically literate workforce that understands rudimentary operating system commands, basic word processing and spreadsheets, e-mail, and Internet software. Making this assumption without considering the nature of the workforce is misguided and counter-productive. Not only may the workforce not be computer literate, but it may not be inclined to become literate. Elliott and Tevavichulada (1999) report that 95% of public sector employees and 82% of private sector employees have had some computer training. Only 35% of employees indicate that they receive computer training on a regular basis.

As a consequence, organizations also need to examine the factors that affect knowledge acquisition and use, both of which may provide the means to sustain competitive advantage and which are heavily dependent upon the technologies that support them. The purpose of this chapter, therefore, is to provide additional insight into the relationship between type preferences, the learning environment including knowledge acquisition and use, and technological literacy within the context of the training and development of individuals within organizations.

Defining Technological Literacy

We define technological literacy in two parts: computer literacy and information literacy. An employee is not technologically savvy unless both components have been addressed (Stern, 2001).

Computer literacy is the ability to use applicable hardware and software efficiently and effectively. Normally, this means using a personal computer for word processing, spreadsheets, databases, and e-mail, and understanding operating system commands and interfaces.

Information literacy is much broader and includes the ability to recognize information needs and identify, evaluate, and use information effectively (Bruce, 1999). Kanter (1995, p. 3) says: "It implies an understanding of the general concepts of information processing, how information systems shape and support a person's job function, a department or operating unit, or an enterprise-wide application." Understanding the vocabulary of technology is critical—employees must speak computerese (Dahmer, 1994). Angel (1994) notes a difference between being a computer literate and being a computer utilitarian: someone who has the skills and knowledge to manipulate the technology for the organization's good. We further expand this definition to include the ability to get the right information, in the right format, at the right time, to the right person, in the right amount to meet the organization's needs.

One concept that is very pertinent to technological literacy and type preferences is the paradigm of the learning organization. Garvin (1998, p. 51) defines the learning organi-