This chapter will present cross-case analyses and link findings from the study to the literature on organizational learning, communities of practice, and information science. First, the characteristics of communities of practice will be described with regard to the two major functions of CoPs: social construction of knowledge and the creation of opportunities for the development of professional socialization and identity. Then, communities of practice and IT integration will be presented in order to discuss the role of IT in the different types of communities of practice examined in Chapters 4–6 (i.e., a community of practice in Square County, two communities of practice in Circle County, and online communities of practice). Following the discussion of the ways in which IT can support communities of practice, implications of these studies for further research and development in the following three areas will be discussed: education, information science, and communities of practice.

7.1 Characteristics of Communities of Practice

7.1.1 Social Construction of Knowledge in Communities of Practice: Three Kinds of Knowledge

In a community of practice, various types of knowledge can be shared. Three types of knowledge are articulated here: cultural knowledge and two kinds of subject-matter knowledge – practical and book knowledge (see the knowledge typology in Table 7.1). In some communities of practice, the subject matter changes rapidly (e.g., communities of practice for lawyers or IT professionals). Consider the fact that among database administrators normalization of database structure was a requirement for many years; advances in processors and the present availability of cheap hardware, however, led some to assert that normalization was not as important as it was in the past (cf., Kottke, 2004). Such alterations in a profession’s foundational understanding demonstrate the importance of the rapidly changing nature of knowledge in communities of practice. Moreover, organizational culture can change...
rapidly, perhaps because of a high turnover rate. The original definition of a community of practice proposed by Lave and Wenger (1991) appeared to refer only to static cultural knowledge and subject-matter knowledge because those studies examined communities that had existed for a significant period of time. However, many jobs now require workers to master subject matter that is evolving rapidly. Therefore, it is imperative that we address the learning of rapidly changing subject-matter knowledge in communities of practice.

In this book, cultural knowledge refers to what it is like to be a member of a certain profession (e.g., a public defender). As such, we have focused on the development of professional identity (see Chapter 5). The tacit knowledge necessary for an individual to become a full member of a community of practice is embedded in the culture of the workplace. For example, younger attorneys learn how to be public defenders by observing more experienced attorneys and by talking with them. As Huseman and Goodman (1999) state, “culture is one of the most powerful stores of knowledge” (p. 121).

We have classified subject-matter knowledge as either book knowledge or practical knowledge (see the knowledge typology in Table 7.1). Book knowledge refers to factual knowledge, such as empirical information gained via encyclopedic awareness of historical case laws and statutes. In contrast, practical knowledge refers to real-world application of book knowledge; for example, knowing how to use precedents identified in LexisNexis or Westlaw in a bench trial. Attorneys learn most of their book knowledge in law school, but they also are required to continue acquiring new book knowledge because criminal laws are rapidly changing. In addition, the attorneys have to learn how to use their book knowledge, a process that leads to the conversion of book knowledge into practical knowledge.

To understand how book knowledge is assimilated as practical knowledge, which is easily shared with other people, I would propose the application of Actor-Network Theory (e.g., Callon, 1995; Latour, 1987). Actor-Network Theory describes relationships within social networks. Latour developed this theory to explain how scientific knowledge is shared and constructed among scientists working in labs. The most intriguing aspect of this theory is the inclusion of artifacts into social networks as a means for the construction of shared knowledge. According to Actor-Network Theory, artifacts influence the construction of knowledge to the same degree that people do, an observation that led Latour and his colleagues to coin the term

---

1 Of course, when considering statutes and case law, there is room for interpretation. However, in order to arrive at reasoned interpretations, one needs this book knowledge.