

## Chapter 56

# Understanding Tacit Knowledge in Decision Making

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### ABSTRACT

*The “semi-professional” sector of the economy continues to grow and represents one of the largest areas in the economy and within higher education programs. Of these programs, the health professions are showing the largest growth. Decision-making, reflective thinking, critical thinking, and reflective practice have all been described as contributing to professional knowledge development in these professions (Kinsella, 2009; Kenimer-Leibach, 2011; Mamede & Schmidt, 2004; Gustafsson & Fagerberg, 2004). Professional knowledge is a collective term encompassing the explicit and tacit knowledge needed for effective practice. The explicit knowledge in these fields has received extensive study, but implicit knowledge remains largely unexamined. In this chapter, the authors examine the nature of tacit knowledge for semi-professionals in the health field and how it shapes their work environment. Specifically, this chapter presents the results of a study of medical laboratory scientists, and provides Implications for professional development, theory, and further research.*

### INTRODUCTION

Employees working in the so-called “semiprofessional” fields (i.e., jobs that have multiple paths to entry, require less extensive training, and have lower levels of decision-making control over the core of their work) are often depicted as becoming “de-skilled” to the point where these workers are simply following standard rules of practice in order to make routine decisions, without the need for deeper theoretical understanding or complex critical thinking skills (Littler, 1982). Practitioners enter these fields with an abundance of technical knowledge. However, the importance of implicit or tacit knowledge gained

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through observation and practice are often discounted in these fields, even though they are a critical part of reflective thinking, critical thinking, and reflective practice (Gustafsson & Fagerberg, 2004).

Similar to all semiprofessional fields, health care technologists face a dynamic environment due to constant technological advances. The technologists in a medical laboratory, known as medical laboratory scientists (MLS), provide laboratory results in highly technical and complex testing environments. They are required to make decisions at the preanalytical (before testing), analytical (during testing), and post analytical (reporting) stages of laboratory testing (Wians, 2009). They evaluate new test methodologies and instrumentation, provide accurate and precise data through the implementation of quality assurance programs, and troubleshoot technological and instrument malfunctions. In addition, they are required to communicate with laboratory colleagues or other professionals who are responsible for the direct care of a patient. Although these decisions points may appear to be “routine”, they often represent so-called “original decisions” (Vlahovic, 2008).

Unfortunately, in general, insufficient research is available on the role of tacit knowledge in the decision making of semiprofessional “technical” work, even though research indicates that it plays an important role (Schmidt & Hunter, 1993). Identifying the tacit knowledge within decision making is difficult, as Polanyi’s (1967) famous quote captures: “We know more than we can tell” (p. 4). This chapter will summarize a research study addressing the role of tacit knowledge in MLS’ decision making, and how it impacts the reflective thinking process and the development of professional knowledge in this field’s work environment.

This study looks at how MLS describe problematic situations on a daily basis while performing blood and body fluid analyses within the clinical laboratory using various types of technology, such as computers, machines or analyzers. This research, following a qualitative phenomenological paradigm, draws from both observations of and interviews with MLS around “critical incidents” (Flanagan, 1954) and routine practice.

## **BACKGROUND**

Decision making in the health professions has been studied through many conceptual models, including “reflective practice”, “reflective thinking”, “knowing-in-action”, “reflection-in-action”, and “problem solving” (Gustafsson & Fagerberg, 2004; Kenimer-Leibach, 2011; Kinsella, 2009; Mamede & Schmidt, 2004). Within these related models, two types of knowledge occur: 1) the *know what* (explicit knowledge), as captured through the knowledge base and explicit problem solving strategies, and 2) the *know how* (sometimes termed “procedural knowledge”, or application of tacit knowledge), as captured through a sort of unconscious routinization of performance (Taylor, 2007). In order to understand decision making and how it relates to explicit and tacit knowledge, it is valuable to look at these related conceptual models.

### **Reflective Practice: Reflective Thinking, Knowing-In-Action, Reflection-in-Action, and Problem Solving**

Reflective practice is described as integrating differing forms of knowledge, namely, personal and professional knowledge, knowledge as problem-solving, and knowledge as process (Schon, 1983). Within a semiprofessional work context, reflective practice is thus the integration of theory and practice (knowing and doing), as practitioners must be able to apply technical skills, revise their knowledge in uncertain

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