For teachers and educational leaders the sorting out of the various learning theories and the associated instructional design and leadership strategies can be somewhat confusing. Why does it seem so difficult to differentiate among the various learning theories and why do the terms and strategies of each theory overlap? This chapter attempts to sort out some of this confusion. We have restricted our discussion to behaviorism, cognitivism and constructivism, recognizing we could have discussed theories such as connoisseurship, semiotics and contextualism. We have delimited our elaboration to the basic learning theories, since they are the ones that have the greatest impact on teaching, learning and leading.

In this chapter we briefly describe what is meant by theories and models, the basic elements of the three learning theories, the history of learning theories in instructional design and leadership, as well as learning theories and the practice of instructional design and leadership. We conclude the chapter by trying to answer the question as to whether there is a one best theory for instructional design and leadership. In large part, this chapter provides a retrospective analysis of the evolution of theories of learning, designing and leading within the context of recent history, recognizing that extensive analysis is not possible within the limits of one chapter. This chapter is based in part on the work that one of the authors, Mergel (1998), had done on instructional design and learning theory.

THEORIES AND MODELS

Theory is not a collection of facts; it is a way of thinking about organizational life. Theories in educational organizations provide a way of seeing and analyzing teaching, leading and learning more accurately and deeply than one otherwise could.
The way to see and think about teaching, leading and learning is based upon patterns and regularities.

Theories are a systematic body of knowledge that allows us to understand, explain, and predict phenomena within a given area. The alternative to using theoretical knowledge is to scurry through a maze of practices mindlessly hoping to guess the right actions. It is fair to say that we know considerably more about teaching, leading and learning than we have in the past (Sackney, in press).

Theories are useful because they provide a basis for thinking systematically about complex problems, such as what is the best way to teach children in different subject areas or what is the best way to lead for a learning community. Theories allow us to do useful things: (1) describe what is going on; (2) explain and predict behavior; (3) predict future behavior under given circumstances; and (4) exercise control over events (Owens, 2001, p. 21). However, a theory can never be established beyond all doubt and a theory may be modified because of further insights. Further, a theory is seldom thrown out completely if thoroughly tested, but sometimes a theory may be widely accepted for a long period of time and later disproved (Dorin, Demmin & Gabel, 1990). Whether a theory is maintained, revised, or abandoned is determined by the outcome of research generated by the theory.

A model, on the other hand, is a simple representation of social reality. Unlike theory, a model is typically not used to explain a complicated process; rather, “it [model] is used to simplify the process and make it more understandable” (Hergenhahn & Olson, 1993, p. 23). Models are generally used to show how something is like something else. For example, reinforcement theory is an attempt to explain why learning occurs. It is not an attempt to explain what learning is like, as would be the case with a model. Dorin et al. (1990) contend that a model is a mental picture that helps us to understand something we cannot see or experience directly. As such, a model helps us to make sense of a given construct.

BEHAVIORISM, COGNITIVISM AND CONSTRUCTIVISM

In this section we discuss the basics of behaviorism, cognitivism and constructivism. Behaviorism is based on observable changes in behavior. It focuses on new behavioral patterns being repeated until the behavior becomes automatic. Cognitivism is based on the thought process behind the behavior. Changes in behavior are observed and used as indicators as to what happens inside the learner’s mind (Schuman, 1996). Constructivism, on the other hand, is based on the premise that we all construct our own perspective of the world through individual experiences and schema. Learning is a process that engages the learner in sense-making activities that are shaped by prior knowledge (Piaget, 1976).

The Basics of Behaviorism

Behaviorist theory, dating back to Aristotle, focuses on the study of overt behaviors that can be observed and measured (Good & Brophy, 1990). Although most