The concept of a learning disability has a long history, but it has been over only the past three decades that this concept has seen a steady proliferation of research investigating its associated neuropsychological factors (Hooper & Willis, 1989; Rourke, 1985). One major research trend emerging from these efforts is that a learning disability is now considered a generic classification that represents a heterogeneous group of disorders. This trend already has been incorporated into the most recent attempts to define this phenomenon, with a major emphasis being placed on known or suspected neurological aspects. Empirical support for this conceptualization has begun to emerge from multiple levels of analysis, including findings obtained from behavioral, physiological, and anatomical studies (Hiscock & Kinsbourne, 1987).

The conceptual and empirical neuropsychological basis of learning disabilities has facilitated productive contemporary thought about this group of disorders. Currently, several neuropsychological models of learning disabilities have been proposed. These models are valuable because they provide frameworks for guiding future research efforts and current clinical practices. This chapter reviews the neuropsychological basis of learning disabilities, discusses selected neuropsychological models that have been advanced from this perspective, and outlines associated conclusions in terms of their implications for research and practice.

Neuropsychological Basis of Learning Disabilities

It is clear that neuropsychology plays a prominent role in contemporary thinking about learning disabilities (Gaddes, 1985; Hooper & Willis, 1989; Hynd, Connor, & Nieves, 1988; Knights & Bakker, 1976), but the neuropsychological basis of learning disabilities conceptually is rooted in its historical foundation. In addition, those definitional issues discussed in chapter 1 that currently plague the diagnosis of learning disabilities have contributed to contemporary conceptualizations.
Empirical research that addresses the neuropsychological basis of learning disabilities strengthens the conceptual understanding of this group of disorders. This research now has been conducted at a variety of levels of analysis, each of which addresses different constructs and uses different methods. This section reviews the neuropsychological basis for learning disabilities from conceptual and empirical perspectives.

**Conceptual Basis**

The chronicle of learning disabilities includes early attempts to accumulate case-study data for individuals afflicted with various kinds of learning problems. Several such attempts are found in medical literature (e.g., ophthalmology journals) that is well over a century old. These early attempts provided information from which several theories were advanced. Although most of these theories no longer are tenable, they served an important purpose by helping to establish a conceptual basis for learning disabilities.

**Early Case Studies**

Kirk (1963) generally is recognized as coining the term *learning disability*, but the study of individuals with specific learning difficulties has a clinical and research legacy dating back more than 100 years. At that time, several investigators presented case-study data depicting learning problems of a specific nature. Several such attempts are found in medical literature (e.g., ophthalmology journals) that is well over a century old. These early attempts provided information from which several theories were advanced. Although most of these theories no longer are tenable, they served an important purpose by helping to establish a conceptual basis for learning disabilities.

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Morgan (1896) was among the first to describe an adolescent case with specific learning problems. He reported that after 7 years of instruction, a 14-year-old boy could read only letters and single syllables. The adolescent’s writing to dictation also was poor. In 1898 Bastian described another adolescent with similar symptoms. Despite adequate speech and language skills, athletic prowess, and good arithmetic skills, this 18-year-old boy consistently manifested word reversals in reading and severe deficiencies in spelling.

Other cases reported at the turn of the century further emphasized the heterogeneous nature of specific learning deficits, with several of these case reports postulating the presence of a familial component that was contributing to the learning difficulties (Fisher, 1905; Hinshelwood, 1909;