

Some instructional methods, however, are based on a rather different set of assumptions about learning. These methods, often organized under the rubric of "mastery learning," recognize the importance of building basic component skills and competencies to mastery before teaching more complex or composite material and assume that most students *can* master a particular topic if given enough time, attention, and instruction to do so (Ormrod, 2000). The challenge, of course, is that in most classrooms it can be very difficult to provide each student with enough time, attention, and instruction to ensure mastery. Since at least the 1920s, a variety of mastery learning strategies have been developed to address such challenges (Block, 1971). From Washburne's Winnetka Plan (1922) to Morrison's approach at the University of Chicago's laboratory school (1926) to Carroll's model of school learning (1963) to Bloom's Learning for Mastery (1968) to many of the systems described in this volume, each is designed to maximize the proportion of students who attain our educational goals and to make certain that no student is left behind. One of the most prominent examples of mastery-based teaching is the Personalized System of Instruction (PSI) (Keller, 1968).

Developed and introduced in the 1960s as an alternative to the dominant lecture-based method of college teaching, PSI shares several features in common with other approaches to mastery learning. Yet PSI is distinguished by the considerable flexibility with which the details of the system can be implemented and, more importantly, by the remarkable amount of research demonstrating its effectiveness in a variety of settings. Few educational innovations have been subjected to the empirical scrutiny PSI has, and fewer still have emerged so unscathed. Although interest in PSI peaked in the 1970s and has decreased sharply in the decades since (Buskist, Cush, & De Grandpre, 1991), it remains an attractive model for educators concerned with improving the quality of their instruction. Further, advances in information technology and telecommunications have the potential to greatly improve certain aspects of PSI courses and alleviate some of the factors that have contributed to its decline.

HISTORY AND OVERVIEW

Fred Keller, Gil Sherman, Rodolpho Azzi, and Carolina Martuscelli Bori initially developed PSI in 1963 while founding the department of psychology at the new University of Brasilia (Keller, 1968, 1982a). Keller became the most ardent advocate of PSI, and the system is sometimes called the *Keller Plan* or the *Keller Method* in his honor. Dissatisfied with conventional teaching methods and well-trained in learning theory, the designers sought to create a system that rewarded students more than it penalized them, promoted mastery of the content, and increased the amount of interpersonal communication within the classroom. The result was a general course model first piloted by Keller in a small, short-term laboratory course at Columbia University in 1963 and later implemented on a