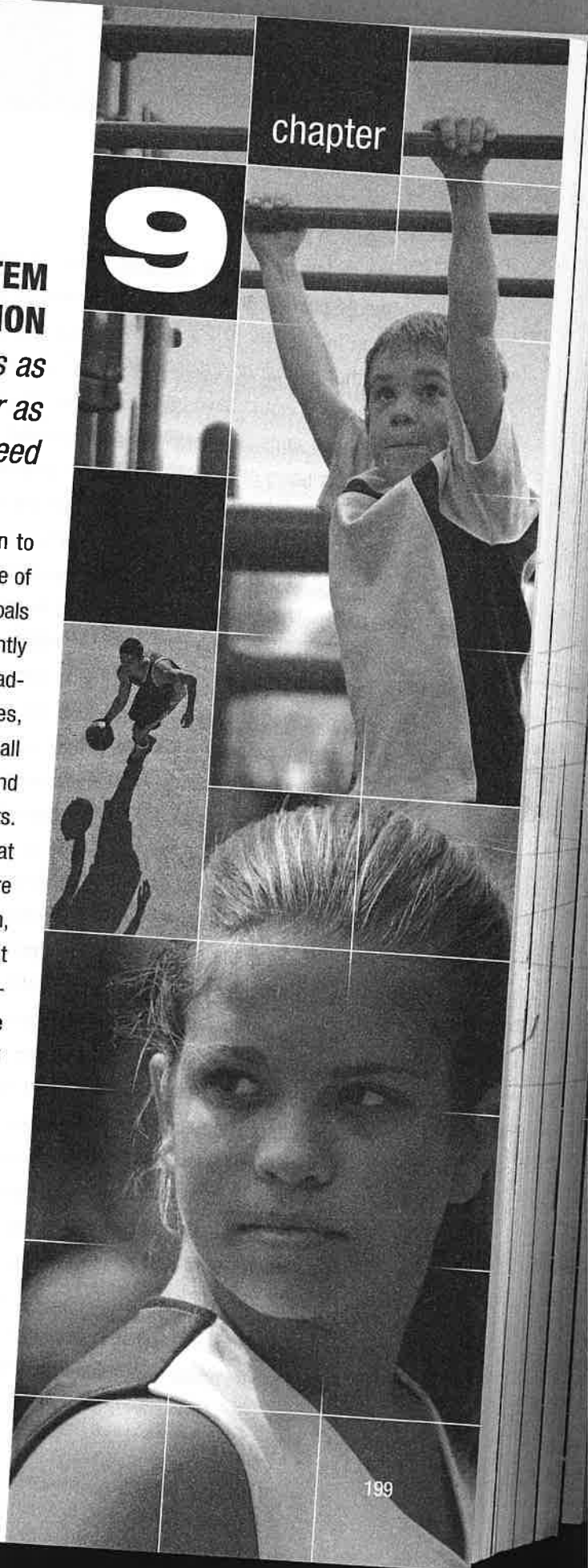


PERSONALIZED SYSTEM FOR INSTRUCTION

*Students Progress as
Fast as They Can or as
Slowly as They Need*

Providing individual instruction to every student in the class is one of the most frequently mentioned goals of teaching. It is also one of the least frequently achieved goals of teaching. Large classes, inadequate time, limited equipment and facilities, and a typically wide range of student abilities all work against a teacher who attempts to plan and implement individualized learning for students. From another perspective, it should be noted that nearly all instructional strategies and models are simply not designed for individual instruction, and they are able to give only well-intended but unsuccessful attempts at personalizing instruction in physical education. Some models are more successful than others, but only one model is designed to provide truly individualized instruction. That model is called the Personalized System for Instruction (PSI). It is also known as the *Keller Plan*, after its developer, Fred Keller.

PSI was developed by Keller and his graduate students at the University of Sao Paulo, Brazil, in the early 1960s and refined a few years later at Arizona State University (Keller & Sherman, 1974). Faced with teaching Introductory Psychology to



sections of over 300 students, Keller immediately realized that the traditional lecture approach would not meet the needs of those students. Keller had come from the research tradition of applied behavior analysis, which focused on observing and teaching as few as one subject at a time, so he set out to design an instructional model that would provide an individual learning program for all students. The educational world was introduced to PSI in the provocative article "Goodbye, Teacher!" (Keller, 1968) in the *Journal of Applied Behavior Analysis*. You can imagine how readers, especially teachers, would have reacted to just the title of the article. Now imagine the reactions of those same people reading Keller's design for instruction, which placed the teacher at the periphery of the instructional process and suggested that students could learn more if the teacher were less involved in the direct transmission of content!

After the initial article (Keller, 1968), Keller modified his plan a bit, recognizing that he had underestimated the role of context and student motivation (Keller & Sherman, 1974). The biggest problem with his original plan was that he considered time (for instruction) to be unbounded. That is, the PSI plan was first designed to give students unlimited time to learn. Eventually accepting that time is rarely unlimited in education, he modified some of the radical claims for PSI's learning effects. Notice that he did not change his claim for PSI's ability to provide individualized instruction for every learner—he acknowledged only that some students would simply "run out of time" in the term before they achieved all that was intended. The very strong research history examining the effectiveness of PSI in every subject among nearly all age groups of learners bears this out. Lowry and Thornburg (1988) published a summary of research on PSI that included more than 1,500 references just from 1968 to 1988.

Though the use of PSI in physical education has been limited, it has great promise as an effective instructional model for nearly all movement content and across most grades, particularly at the secondary levels. Siedentop (1973) was the first to suggest the possibility of using PSI as an instructional model for physical education, although his suggestion referred mostly to cognitive content for college students. The most complete implementation of PSI in physical education for activity instruction appears in the *Personalized Sport Instruction Series*, edited by Metzler (2000). That series contains complete PSI units for badminton, golf, tennis, racquetball, soccer, and volleyball. Although designed for college-level activity courses, such PSI courses can easily be adapted for use in any grade from middle school upward, as I will show later in this chapter.

OVERVIEW

The PSI model is designed to allow each student to progress at his or her own pace through a sequence of prescribed learning tasks. The learning tasks are derived from a task analysis for each of the skills and knowl-

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edge areas to be covered in the content unit, determining the content listing for the entire unit. Every learning module includes information on task presentation, task structure, error analyses, and performance criteria given to students in a written and/or mediated format. The key here is that teachers do not provide this information to students in person; students read prepared materials or view video samples instead. This method frees the teacher from having to spend class time on those functions, allowing her to have much more instructional interaction with students. As each student completes a learning task to its stated performance criteria, he then moves to the next task on the list, without depending on the teacher for permission or directions.

When used in very large classes in which the teacher has designated assistants, PSI as it was designed by Keller relies on proctors to review unit exams, assist students with logistics, and provide one-on-one tutoring (Keller & Sherman, 1974). Those proctors could be teaching assistants, teacher's aides, or advanced students. In most applications for physical education in schools, the availability of proctors is limited. But there are other ways to provide that function for students, which this chapter will discuss. Because there are few, if any, teacher-directed task presentations, PSI instructors use interactions with students to furnish motivation and instructional information (e.g., feedback and one-on-one tutoring).

The PSI model is based on a *unified plan* for the content unit; there are no daily lesson plans. Students progress individually through the sequence of learning tasks, simply beginning each lesson where they left off in the previous one. The teacher need only be aware of which tasks will be attempted in the upcoming lesson so that he can provide the necessary equipment for student engagement with them. The responsibilities of providing students with information about class management, learning tasks, and assessment are carried out with a course workbook and instructional media (videos, DVDs, or online sources). Students read and follow the course workbook as much as possible; the teacher offers only needed clarification and details not covered in the workbook. (Refer to the sample workbook on the IMPE website.)

The basic design goal of PSI encourages students to be independent learners and, at the same time, allows the teacher to use high rates of interaction with students who need it. It has proven to be a highly effective model for student achievement in the psychomotor and cognitive domains.

ALIGNMENT WITH NASPE NATIONAL STANDARDS

Exhibit 9.1 shows the alignment of the PSI model with the NASPE standards. This model is most strongly aligned with those standards that focus on competency with skill and movement patterns and those that focus on movement concepts, principles, strategies, and tactics. Due to the specific wording of some standards, PSI is strongly aligned for some outcomes in certain standards but weakly aligned for other outcomes in those same standards. It should be emphasized that the ability of PSI to address each of the national standards will be affected by the way a teacher designs specific learn-

