

# Educational Leadership

February 2005 | Volume 62 | Number 5  
How Schools Improve Pages 81-83



## Research Matters / How Student Progress Monitoring Improves Instruction

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In today's education climate, school success is defined as ensuring achievement for every student. To reach this goal, educators need tools to help them identify students who are at risk academically and adjust instructional strategies to better meet these students' needs.

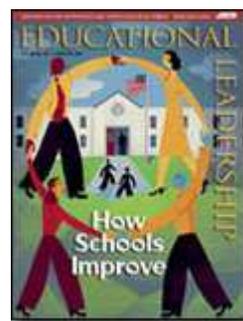
Student progress monitoring is a practice that helps teachers use student performance data to continually evaluate the effectiveness of their teaching and make more informed instructional decisions.

To implement student progress monitoring, the teacher determines a student's current performance level on skills that the student will be learning that school year, identifies achievement goals that the student needs to reach by the end of the year, and establishes the rate of progress the student must make to meet those goals. The teacher then measures the student's academic progress regularly (weekly, biweekly, or monthly) using *probes*—brief, easily administered measures. Each of the probes samples the entire range of skills that the student must learn by the end of the year, rather than just the particular skills a teacher may be teaching that week or month.

This is the key difference between student progress monitoring and mastery measurement approaches, such as teacher-made unit tests. Mastery measurement tells teachers whether the student has learned the particular skills covered in a unit, but not whether the student is learning at a pace that will allow him or her to meet annual learning goals. By regularly measuring all skills to be learned, teachers can graph changes in the number of correct words per minute (reading) or correct digits (math) and compare a student's progress to the rate of improvement needed to meet end-of-year goals. If the rate at which a particular student is learning seems insufficient, the teacher can adjust instruction.

To track student progress, the teacher graphs a line between the student's initial level of performance on a specific skill and the end-of-year goal. Then, the teacher plots the level of performance as each probe is administered. After noting the pattern of progress, the teacher can adjust instruction to improve student learning. If the student's performance falls below the line, the teacher may use more intense instruction (in small groups or one-on-one), reteach the material, or provide additional opportunities for the student to practice certain skills.

Although schools can develop the probes themselves, developing enough equivalent, alternate probes for frequent measurement at each grade level is daunting for many schools. Therefore, they often turn to commercially available products, most of which are computer-based and can automatically graph the progress of individual students. Available products range in cost from under \$200 to several



February 2005

thousand dollars. Information about resources and tools recently reviewed by the National Center for Student Progress Monitoring can be found at [www.studentprogress.org](http://www.studentprogress.org).

## What We Know

Research has demonstrated that when teachers use student progress monitoring, students learn more, teacher decision making improves, and students become more aware of their own performance. A significant body of research conducted over the past 30 years has shown this method to be a reliable and valid predictor of subsequent performance on a variety of outcome measures, and thus useful for a wide range of instructional decisions (Deno, 2003; Fuchs, Deno, & Mirkin, 1984; Good & Jefferson, 1998).

Although student progress monitoring (then called curriculum-based measurement) was initially developed to assess the growth in basic skills of special education students, specific research has validated the predictive use of this method in early literacy programs (Good, Simmons, & Kameenui, 2001) and in the identification of general education students at risk for academic failure (Deno, 2003). In addition, some evidence shows the reliability and validity of student progress monitoring procedures in evaluating the progress of English language learners (Baker & Good, 1995).

Fuchs and Fuchs (2002) conducted an analysis of research on student progress monitoring that considered only experimental, controlled studies. These researchers concluded that

When teachers use systematic progress monitoring to track their students' progress in reading, mathematics, or spelling, they are better able to identify students in need of additional or different forms of instruction, they design stronger instructional programs, and their students achieve better. (p. 1)

## What You Can Do

Student progress monitoring fits well into the routine of the classroom. The probes can be administered quickly, and the results are immediately understandable and easy to communicate. In some classrooms, students graph their own progress and find it motivating to "make the line go up." The following example shows how a 3rd grade teacher might use student progress monitoring.

During the first week of school, Ms. Cole includes as part of her initial probe of all students in her class an oral passage-reading test. She selects several 3rd grade-level reading passages and has each student read aloud for one minute while she notes any errors. She uses this assessment to identify any students at risk of scoring below grade level in oral reading fluency on the state end-of-year reading test. In reviewing the scores, Ms. Cole sees that six students have low scores, placing them at risk.

Ms. Cole determines each of these student's current reading rate (correct words per minute) as well as the level that student must attain by the end of the year to demonstrate grade-level reading fluency, and graphs a line indicating the necessary rate of growth. Using different but equivalent-level passages, Ms. Cole then administers a one-minute probe to each student each week, graphs the number of correct words the student reads per minute, and compares that score with the goal line.

After six weeks, Ms. Cole sees that the rate of growth for two students is relatively flat, indicating that the reading instruction she is providing for them is not effectively moving them toward their end-of-year goal. Ms. Cole decides to provide 15 minutes of additional reading instruction focusing on particular reading skills to those students each day, and to monitor their progress twice weekly.

After three more weeks, Ms. Cole sees that the growth rate of one student has improved significantly. She discontinues the extra reading instruction but continues to monitor the progress of that student weekly. The second student still shows relatively flat progress, so Ms. Cole refers the student to the

school reading specialist, who provides remedial services and continues to monitor the student's progress twice weekly.

## Educators Take Note

Deno (2003) points out that because this process was originally designed for use in individualized special education,

The most effective uses of CBM in the formative evaluation of individual student programs almost certainly occur in settings where individual (special) education teachers have the time and skills to respond to the charted progress of individual students. (p. 190)

Researchers are now finding that schools can also use student progress monitoring effectively to support regular education students and special education students in inclusive classrooms. As Fuchs and Fuchs (1998) found, using student progress monitoring with larger groups requires extra effort. But many teachers will find this strategy worth the effort because it provides a powerful tool that can help them adjust instruction to ensure that all students reach high standards.

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