

CHAPTER 20

Building, Implementing, and Sustaining a Beginning Reading Improvement Model: Lessons Learned School by School

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INTRODUCTION

The goal of having all children read at or above grade level by the end of Grade 3 appears closer to reality than at any point in educational history. The scientific knowledge base of the causes and correlates of reading success and reading difficulty has never been more mature or convergent. Syntheses of reading research conducted by the National Research Council (1998) and more recently by the congressionally commissioned National Reading Panel (2000) provide ample and compelling evidence of the skills, experience, and knowledge children need to become successful readers in our alphabetic writing system. This research makes clear that children must develop and demonstrate proficiency in the “big ideas” (See Kame'enui & Simmons, 1998) of phonemic awareness, alphabetic understanding, and automaticity with the code. Equally important is the scientific evidence that early reading proficiency is best developed through early, systematic, explicit instruction (National Reading Panel, 2000). Unfortunately, less understood is how to translate this scientific knowledge of early reading into the schools and classrooms charged with the monumental task of teaching all children to read.

An estimated 20% of students will encounter serious reading difficulty or reading disability (Lyon, 1997); another 20% will have reading difficulties so severe as to hinder their enjoyment of reading (Grossen, 1997). The magnitude of reading difficulties

among America's children compels us to rethink our system of reading education. Knowledge of effective, research-based practice is necessary but insufficient. The goal must, therefore, be to increase the probability that research-based effective practices (a) *find* their way into schools, (b) *are implemented* at sufficient levels to effect significant improvement, and (c) *are sustained* over time. Achieving this goal requires that we identify the essential curricular and instructional components in schools that interact with the scientific knowledge base of beginning reading to create an effective and efficient improvement model of reading for the full range of learners. In this chapter, we examine the intricacies of teaching beginning reading in schools and describe a prevention model of schoolwide beginning reading improvement.

Schools are complex educational environments that are made even more complex by social, political, economic, pedagogical, legal, cultural, demographic, and historical forces of the times. Although some of these forces are dynamic (e.g., cultural, social) and others coercive (e.g., legal, economic), they unwittingly shape the very nature and function of schools. Of course, as complex environments, schools come in all sizes, and the cultural, linguistic, and developmental variation of the student populations that occupy each of the more than 85,000 public elementary and secondary schools in the United States (National Center for Education Statistics, 1995) is also great. Given this complexity and diversity, schools have a formidable responsibility to improve the academic and social outcomes of all students. This covenant is perhaps most significant to those students who are at serious academic risk and who present the biggest challenge for public schools every day of the school week. In addressing this challenge, it is imperative to identify those factors that matter most.

DO SIZE AND PLACE MATTER TO SUSTAINING EFFECTIVE EDUCATIONAL PRACTICE IN READING?

In many cases, school size and location matter (Lee & Loeb, 2000). Not surprisingly, large, urban schools are likely to have more complicated administration and organization than small, rural schools. For example, the Los Angeles Unified School District (LAUSD) is the second largest school district in the country. LAUSD has 420 elementary schools, 72 middle schools, 49 high schools, an enrollment of 697,143 students who speak more than 88 different languages and dialects, a certified staff of more than 41,000, and a total district budget of \$6.5 billion. In fact, the budget for the LAUSD is bigger than the *state budgets* of, for example, Alaska, Colorado, Delaware, Hawaii, New Hampshire, or Wyoming.

In contrast to LAUSD is Bethel School District (BSD) in Eugene, Oregon. Bethel has six elementary schools, two middle schools, and one high school, with a total enrollment of 5,246, a certified staff of 272, and a total district budget of \$30 million. The numerical differences between these districts are staggering. LAUSD has *70 times more schools, 133 times more students, 150 times more certified staff, and a budget that is 220 times greater* than BSD. In light of these manifest quantitative differences in the admin-

istrative and fiscal profiles of the Los Angeles and Bethel school districts, it would be reasonable to pose several questions about what these differences mean for reading instruction. For example:

1. Should the classroom instructional practices and interventions be very different in design, scale, and impact for schools in large school districts compared to those in small school districts?
2. Does the extant research direct teachers and administrators to employ a very different curriculum and technology to address the instructional demands of large, urban schools in contrast to small, rural, or suburban schools?
3. Is there reliable evidence from the extant research about “scaling up” for large urban schools in ways that will lead to significant increases in students’ academic achievement?

A reasonable response to each of the questions is an unequivocal “Yes.” After all, large urban schools are the gargantuans of the educational enterprise and are different in almost every aspect from small, rural schools. Yet, with respect to instructional factors, there are critical features that are essential and generalizable irrespective of school size. In fact, there is substantial persuasive literature on scaling up for the implementation of curriculum innovations in such complex environments as LAUSD (Elmore, 1996). An organizing principle of this literature is that solving the problem of scaling up actually requires “scaling down,” which suggests that large, urban districts must behave organizationally, administratively, and pedagogically like small districts. They must recognize that the instructional variables (e.g., core curricular materials, time allocated for instruction) within school jurisdictions that account for differences in learner performance *are the same* across districts. Though organizational factors such as district and school size clearly impact *how* things operate, the common and essential elements of effective schoolwide beginning reading improvement are fundamentally the same irrespective of size. We advance three principles to guide schools’ approach to improving reading achievement:

1. Although school districts vary greatly in size and resources, the principles and strategies for conceptualizing, designing, implementing, and sustaining instructional and behavioral change are *fundamentally* the same for all *individual schools*, whether they are in Los Angeles or Bethel.
2. If effective curriculum programs, instructional and assessment strategies, staff development support, and organizational structures are to be sustained for extended periods of time, they must be anchored, implemented, monitored, and supported at the *school-building level* where the instructional complexities unfold daily.

3. Implementing instructional, behavioral, and organizational change *at the building level* is a *necessary, but insufficient* condition for increasing and sustaining student performance. District-level support and commitment are imperative for long-term sustainability.

The fundamental sameness about beginning reading improvement is that within every school's jurisdiction are alterable variables (e.g., time, group size, curricular goals, instructional materials) (Carroll, 1963) that when carefully understood, strategically managed, and faithfully implemented, are capable of producing positive and sustainable results for the full range of learners.

ADDRESSING THE COMPLEXITIES OF SYMBOLS AND SCHOOLS

Schoolwide beginning reading improvement involves the integration of two complex systems: (a) the declarative knowledge of reading in an alphabetic writing system, and (b) the procedural knowledge of how to organize and implement what we know about reading in a complex host environment known as a school and, which is composed of people, practices, pedagogy, and policy. The elements of both systems and the need for strategic integration to assist schools in attaining the goal of *all children reading* by Grade 3 are detailed in Figure 1.

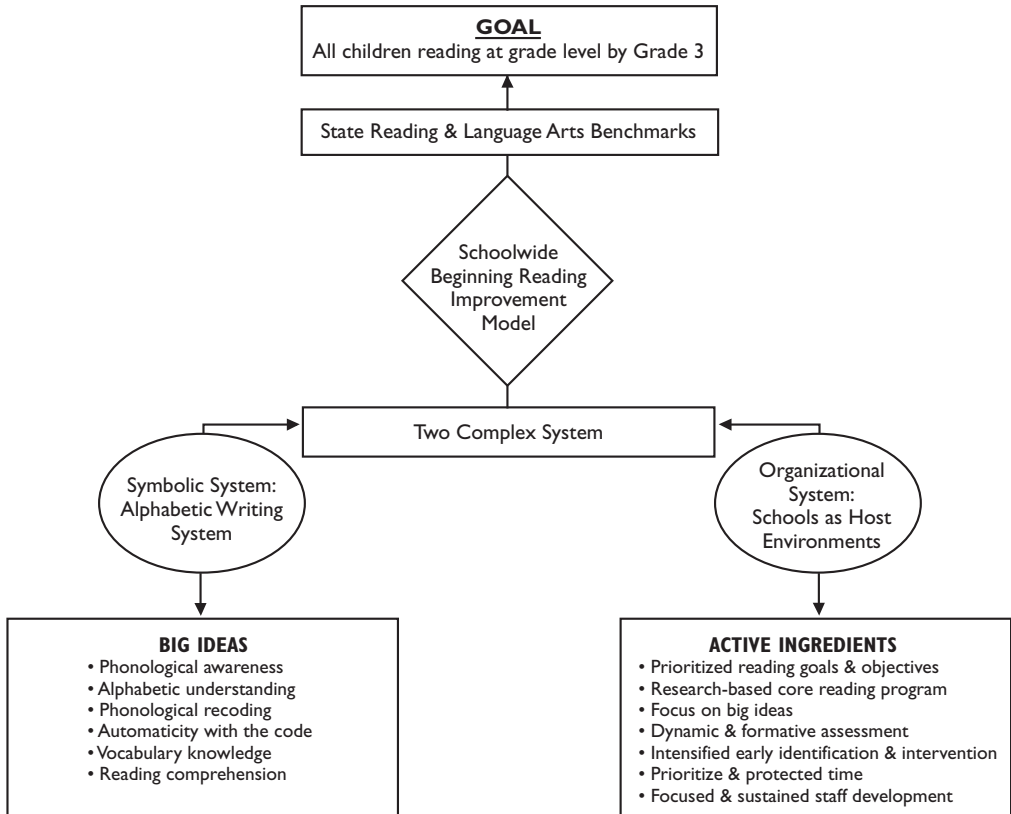
Figure 1 is simple by necessity and does not suggest the complexity of the process. Action plans for individual schools, however, are similar, regardless of school size, site, or socioeconomic status. In the following section, we (a) describe a set of tenets to guide schoolwide beginning reading improvement initiatives and (b) discuss a schoolwide improvement model of reading improvement for translating research into practice. The model and its decision-making processes draw extensively on the work in reading assessment of Kaminski and Good (1996), (e.g., Deno, 1985; L. S. Fuchs & Deno, 1991; Shinn, 1989, 1998 with respect to Curriculum-Based Measurement [CBM]), and M. R. Shinn, M. M. Shinn, Hamilton, and Clarke, this volume. These researchers' procedures for identifying, grouping, problem solving, and performance monitoring are combined with Kame'enui and Simmons' (1998) components of contextual interventions to build an integrated and comprehensive beginning reading improvement intervention model. This model represents an evolution of guidelines and procedures based on lessons we've learned from our work with schools throughout the United States (e.g., Alabama, California, Hawaii, Minnesota, and Texas) and from three years of systematic and sustained implementation in a local school district of Eugene.

SCHOOLWIDE BEGINNING READING IMPROVEMENT MODEL: TENETS AND STAGES

As emphasized earlier in the chapter, our perspective is that the individual school must be the fundamental unit of change if significant and sustainable reading improvement is to occur. Our model of beginning reading improvement adheres to eight research-based tenets listed in Figure 2, on page 542.

FIGURE 1

Two Complex Systems in a Schoolwide Beginning Reading Improvement Model



Collectively, these eight tenets characterize a philosophy of beginning reading improvement that is proactive, intensive, and effective for the full range of learners in schools. In the sections that follow, we illustrate how each of these tenets is implemented in a schoolwide model and the actions and decisions involved in K-3 beginning reading improvement.

Stages and Levels of a Schoolwide Beginning Reading Improvement Model

The architectural blueprint of the model is framed by five successive stages (see Figure 3, on page 543). Within each stage are two distinct levels (school and individual student) that operate concurrently. The premise of the two levels is that school-level decisions have consequences for individual students, for a schoolwide model that employs school-level procedures also must provide for the needs of individual students.

FIGURE 2

Tenets of the Schoolwide Beginning Reading Improvement Model

Schoolwide reading improvement:

1. Addresses reading success and reading failure from a schoolwide *systemic* perspective;
 2. Embraces a *prevention framework* by intervening early and strategically during the critical window of instructional opportunity (National Research Council, 1998);
 3. Recognizes and responds to the *multiple contexts of reading achievement* and includes carefully articulated goals, research-based programs, dynamic assessment, adequate and protected instructional time, quality instructional delivery, differentiated instruction, and effective organization and grouping (Editor, *American Educator*, 1998);
 4. Develops and promotes a *comprehensive system of instruction* based on a research-based core curriculum and enhancement programs (Editor, *American Educator*, 1998);
 5. Anchors instruction and practices to the *converging knowledge* base of effective reading practice (National Research Council, 1998);
 6. Builds capacity in the school by *using school-based teams* to customize interventions to the host environment;
 7. Relies on and fosters the *ability of the school principal* to serve as the instructional leader; and
 8. Uses ongoing tests sensitive to changes of student performance to identify students at risk, plan instructional groups, and modify instruction according to levels and rates of learning (Good, Simmons, & Smith, 1998).
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Stage I: Conduct School Audit and Assess Student Performance K–3

Activities and actions in Stage I focus on two critical levels—the *school* and the *individual* student. As illustrated in Figure 4, on page 544, the primary functions in Stage I are for the school to (a) conduct a thorough and instructionally focused audit of cur-

FIGURE 3

Stages and Levels of a Schoolwide Beginning Reading Improvement Model

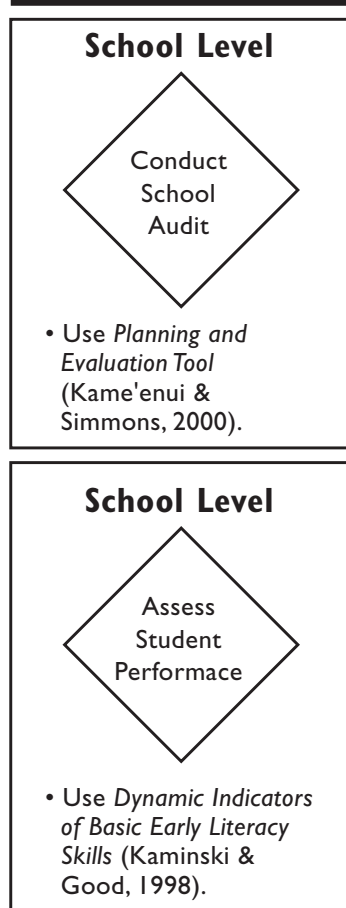
STAGE I: Conduct School Audit and Assess Student Performance	STAGE II: Analyze School and Student Performance	STAGE III: Design Instructional Interventions	STAGE IV: Set Goals and Monitor Progress Formatively	STAGE V: Evaluate Intervention Efficacy and Adjust Instruction									
<p>School Level</p> <p style="text-align: center;">Conduct School Audit</p> <ul style="list-style-type: none"> Use <i>Planning and Evaluation Tool</i> (Kame'enui & Simmons, 2000). 	<p>Identify Reading Priorities and Develop Action Plan</p> <ul style="list-style-type: none"> Review Audit Identify strengths and areas of development based on audit summary scores Identify and develop three priorities Establish Action Plan 	<p>Design Core Instructional Interventions</p> <ul style="list-style-type: none"> Specify the following: <table border="1" style="width: 100%;"> <tr><td>Goals</td></tr> <tr><td>Core Curriculum Program</td></tr> <tr><td>Time for Reading</td></tr> <tr><td>Instructional Grouping and Scheduling</td></tr> <tr><td>Instructional Implementation</td></tr> <tr><td>Progress-Monitoring System</td></tr> </table>	Goals	Core Curriculum Program	Time for Reading	Instructional Grouping and Scheduling	Instructional Implementation	Progress-Monitoring System	<p>Establish and Implement Progress-Monitoring System</p> <ul style="list-style-type: none"> Identify valid and reliable dynamic reading indicators Establish absolute and relative goals Commit resources Determine schedule Interpret and communicate results 	<p>Evaluate School-Level Performance</p> <ul style="list-style-type: none"> Evaluate effectiveness three times per year Examine components of interventions in Stage III Make instructional adjustments Determine whether and for whom to maintain or adjust intervention 			
Goals													
Core Curriculum Program													
Time for Reading													
Instructional Grouping and Scheduling													
Instructional Implementation													
Progress-Monitoring System													
<p>Student Level</p> <p style="text-align: center;">Assess Student Performance</p> <ul style="list-style-type: none"> Use <i>Dynamic Indicators of Basic Early Literacy Skills</i> (Kaminski & Good, 1998). (CBM) (Deno, 1985; L. S. Fuchs & Deno, 1997; Shinn, 1998) 	<p>Analyze Individual Performance and Plan Instructional Groups</p> <ul style="list-style-type: none"> Identify students who require: <table border="1" style="width: 100%; text-align: center;"> <tr><td>Benchmark Intervention</td></tr> <tr><td>Strategic Intervention</td></tr> <tr><td>Intensive Intervention</td></tr> </table>	Benchmark Intervention	Strategic Intervention	Intensive Intervention	<p>Customize Intensive and Strategic Interventions</p> <ul style="list-style-type: none"> Specify the following: <table border="1" style="width: 100%;"> <tr><td>Goals</td></tr> <tr><td>Core or Specialized Curriculum Materials</td></tr> <tr><td>Time for Reading</td></tr> <tr><td>Instructional Grouping and Scheduling</td></tr> <tr><td>Instruction</td></tr> <tr><td>Progress-Monitoring System</td></tr> </table>	Goals	Core or Specialized Curriculum Materials	Time for Reading	Instructional Grouping and Scheduling	Instruction	Progress-Monitoring System	<p>Customize Progress-Monitoring System for Intensive and Strategic Interventions</p> <ul style="list-style-type: none"> Intensive: Monitor progress every 2 weeks Strategic: Monitor progress every month Benchmark: Monitor progress three times per year 	<p>Intensify Intervention</p> <ul style="list-style-type: none"> Determine students who are and are not "learning enough" Chart instructional profiles for students making little or no progress Adjust components of interventions in Stage III
Benchmark Intervention													
Strategic Intervention													
Intensive Intervention													
Goals													
Core or Specialized Curriculum Materials													
Time for Reading													
Instructional Grouping and Scheduling													
Instruction													
Progress-Monitoring System													

rent reading practices, and (b) assess each student’s reading performance on a set of grade-appropriate and instructionally relevant measures.

Conduct school audit. The first goal for a school is to determine what is currently in place with respect to (a) instructional priorities, (b) reading assessment, (c) instructional practices and materials, (d) time allocated to reading instruction, (e) grouping and organizational strategies, (f) administrative involvement and decision making, and (g) professional development. To obtain this information, schools conduct an internal audit using the *Planning and Evaluation Tool for Effective Schoolwide Reading Programs* (Kame’enui & Simmons, 2000). The audit uses a 100–point scale divided across seven areas (e.g., goals and priorities, assessment) to quantify a school’s current state of practice, and the resulting data provides a first step in identifying areas of improvement. The tool’s purpose is to quantify and develop awareness of a school’s current policies and practices in beginning reading. Figure 5, on page 545, presents items from the Administration, Organization, Communication element of the tool. As indicated, respondents complete six items in this area using a 0–2 scale (i.e., 0 = not in place, 1

FIGURE 4**STAGE I:**

Conduct School Audit
and Assess Student
Performance



= partially in place, and 2 = fully in place) and document evidence to support the rating. Schools work in grade-level teams or representative teams to evaluate prevailing practices and complete the seven components. The process can be unifying and instructive as teachers and administrators work together to take inventory of their schools' reading disposition. For example, from the items illustrated, schools may realize that while they have a principal who is highly knowledgeable of state standards and priorities and works effectively with staff to create a coherent plan for reading instruction, the coordination of instruction across Title I, special education, and general education may not be complementary—and insufficient to realize schoolwide performance goals. A discussion on how to use this tool follows (see Stage II).

FIGURE 5

**Example Items From Planning and Evaluation Tool for Effective
Schoolwide Reading Programs (Kame'enui & Simmons, 2000)**

		0	1	2
		Not in place	Partially in place	Fully in place
EVALUATION CRITERIA		DOCUMENTATION OF EVIDENCE		
<p>VI. Administration/Organization/Communication - Strong instructional leadership maintains a focus on high-quality instruction, organizes and allocates resources to support reading, and establishes mechanisms to communicate reading progress and practices.</p>				
2	1. Administrators are knowledgeable of state standards, priority reading skills and strategies, assessment measures and practices, and instructional programs and materials.			
2	2. Administrators work with staff to create a coherent plan for reading instruction and institute practices to attain school reading goals.			
2	3. Administrators maximize and protect instructional time and organize resources and personnel to support reading instruction, practice, and assessment.			
2	4. Grade-level teams are established and supported to analyze reading performance and plan instruction.			
1	5. Concurrent instruction (e.g., Title I, special education) is coordinated with and complementary to general education reading instruction.			
1	6. A communication plan for reporting and sharing student performance with teachers, parents, and other stakeholders is in place.			
		<p>10/12 Total Points 80% <i>Percent of Implementation:</i></p>		
		6 = 50%	10 = 80%	12 = 100%

Assess student performance. As shown in Figure 4, the second goal of Stage I is to identify children who may be at risk of reading failure and to determine the need for early intervention (Kaminski & Good, 1996). All children, kindergarten through Grade 3, are screened on 1-minute measures that correspond to the big ideas in beginning reading: (a) phonological awareness, (b) alphabetic understanding, and (c) automaticity with the code (Simmons & Kame'enui, 1998). The tests are used as screening measures; Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and Reading CBM (R-CBM) are not intended to tell us everything about each student's reading skills. Rather, they serve as valid and reliable *indicators* or predictors of skills highly associated with later reading achievement.

In the area of early literacy, DIBELS (Kaminski & Good, 1998) are used to identify children whose performance differs significantly from their same-age peers and who may need early intervention in kindergarten and first grade. DIBELS measures align with the big ideas in early reading and include (a) Letter-Naming Fluency, (b) Onset-Recognition Fluency, (c) Phonemic-Segmentation Fluency, and (c) Nonsense-Word Fluency. Once students are able to read words in connected text (typically mid-first grade) 1-minute measures of oral reading fluency from R-CBM passages are used as indicators of general reading achievement. R-CBM is then used as the primary indicator of reading progress through Grade 5. These measures provide "vital signs of growth in basic skills comparable to the vital signs of health used by physicians" (Deno, 1992, p. 6). In addition, they provide fast and efficient indications of a student's reading well-being on skills that are essential to success in the general education curriculum (Kaminski & Good, 1998). For more information on these practices, see M. R. Shinn, M. M. Shinn, Hamilton, and Clarke, this volume.

A word of caution: reliance on vital-sign indicators does not dismiss or discount the importance of other reading dimensions such as vocabulary and comprehension. Rather, 1-minute R-CBM, fluency-based measures allow educators to identify potential prereading and reading difficulties early and to monitor progress more frequently. The purpose of assessment in Stage I is not to label, but to identify children at risk of reading difficulty to provide levels of intervention necessary to alter and increase early learning trajectories. Figure 6 indicates the administration schedule of early literacy and reading tests by grade. We refer to these tests as big-idea indicators as they align with the critical skills necessary for early reading success (i.e., big ideas).

In Stage I, a centralized system for managing student performance data is established and maintained at the school level to enable timely and informed decisions. In the project described in this school, schoolwide data were collected three times per year, entered into a Web-based template, and forwarded to the Institute for the Development of Educational Achievement (IDEA), College of Education, University of Oregon.

FIGURE 6

**Administration Schedule of Early Literacy
and Reading Tests by Grade**

	Fall	Winter	Spring
Kindergarten			
Letter-Naming Fluency	◆	◆	◆
Onset Recognition	◆	◆	
Phonemic-Segmentation Fluency		◆	◆
Nonsense-Word Reading Fluency		◆	◆
First Grade			
Letter-Naming Fluency	◆		
Phonemic-Segmentation Fluency	◆	◆	◆
Nonsense-Word Reading Fluency	◆	◆	◆
R-CBM		◆	◆
Second–Fifth Grades			
R-CBM	◆	◆	◆

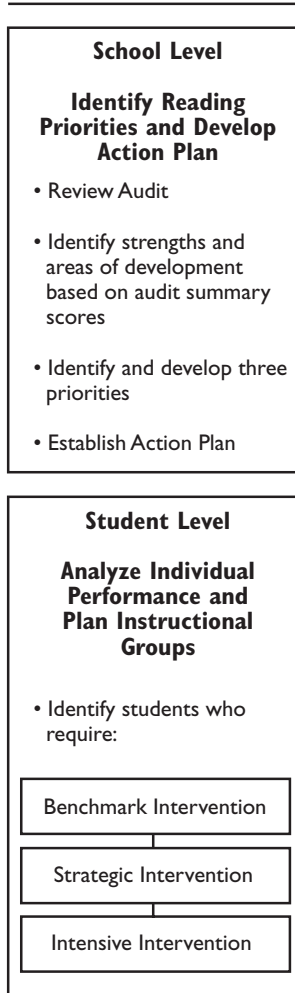
Stage II: Analyze School and Student Performance

Identify reading priorities and develop an action plan. In Stage II, schools review results of the schoolwide audit conducted in Stage I (See Figure 7, on page 548). Audit results quantify what is *in place*, what is *partially in place*, and what is *not in place* along a range of critical dimensions (e.g., reading goals and objectives, assessment tools and strategies, instructional programs). The audit provides information at three levels: (a) an overall score based on a total of 100 points that indicates relative ranking toward a standard, (b) dimension scores (i.e., curriculum programs and instruction, professional development), and (c) individual item scores (e.g., Is there a commonly articulated and understood set of goals in reading for each grade?). After reviewing and completing all items in the audit, schools summarize their overall level of reading implementation quantitatively (see Figure 8, on page 549), prioritize areas of improvement, and develop an “Action Plan” to direct schoolwide beginning reading improvement.

As the percentile scores reflect, this school rated itself high in administration (88%) and goals (81%) and low in differentiated grouping (55%) and assessment (59%). The resulting priorities from this audit included (a) using assessment data to establish flexible grouping to provide differentiated instruction, (b) allowing time to share this information and inservice all teachers regarding the assessment system and instructional

FIGURE 7

STAGE II:
Analyze School and
Student Performance



implications, and (c) implementing assessments three times per year to assess progress and determine instructional needs. These priorities are documented in an action plan (see Figure 9, on page 550) and are used to guide reading improvement for the academic year.

Analyze individual performance and plan instructional groups. In Stage II, schools examine *each* learner's performance on critical prereading and reading skills to determine the scope and scale of instructional needs. Grade-level summary data are provided in the form of histograms that indicate the number of children by level of proficiency on a specific measure (See Figure 10, on page 551). For example, in the fall of 2000, all children enrolled in first grade were administered the Nonsense-Word

FIGURE 8**Summary of Level of Reading Improvement from School Audit**

Element	Score	Percent
I. Goals/Objectives/Priorities	11.5/14	81.4%
II. Assessment	11.8/20	59.0%
III. Instructional Practices and Materials	15.0/22	68.0%
IV. Instructional Time	8.0/14	57.0%
V. Differentiated Instruction/Grouping	5.5/10	55.0%
VI. Administration/Organization/Communication	10.6/12	88.0%
VII. Professional Development	4.5/8	56.0%
Total Score	66.9/100	67.0%

Fluency measure. Results indicated that eight children identified fewer than four correct letter sounds in one minute and six identified more than 75. The distribution of performance on this measure informs the school about the magnitude of need and how to allocate resources. In this school, 25% of students identified less than 20 correct letter sounds, 22% identified 20–39, and 52% identified 40 or more correct letter sounds. The benchmark goal is 40 correct letter sounds by January. From this information, schools determine children who have already reached benchmark goals and those who have not (See Figure 11, on page 552). Moreover, grade-level teams and teachers can identify children who are at risk of not meeting benchmark goals. Benchmark goals indicate a level of performance on a particular measure that (a) establishes a solid, fluent proficiency on the particular measure, and (b) forecasts future performance on higher-order skills. For example, reading 60 correct words per minute in the spring of first grade strongly correlates with reading 90 correct words per minute in the spring of second grade (Good, Simmons, & Kame'enui, in press).

Individual student performance on DIBELS and R-CBM is compared to the benchmark goals to identify children who may be at risk of reading disability or delay (see Figure 8). Performance expectations are derived from research-based criterion levels of performance (Hasbrouck & Tindal, 1992; Good et al., 2000), and students are identified as potentially at risk relative to how other students in their school and district perform and in comparison to research-based criteria. For example, a child entering first grade scoring less than 20 letter sounds per minute on the Nonsense-Word Fluency measure may be at risk, as the target criterion for the mid-first-grade bench-

FIGURE 9**An Action Plan of Instructional Priorities****Planning and Evaluation Tool for Effective Schoolwide
Beginning Reading Programs**

Prioritization and Action

Based on the previous listing of areas to improve, rank order three areas. The areas may include one element or items from several different elements.

Priority #1	Action Plan	Who & When?
To use our assessment data to establish flexible grouping to provide differentiated instruction to benchmark, strategic, and intensive groups.	Teachers review data to establish instructional groups.	Classroom teachers 8/9/01
Priority #2	Action Plan	Who & When?
To allow time to share this information and inservice with others regarding DIBELS and the reading big ideas. To continuously analyze our program and make changes as needed.	Review information in first faculty meeting.	Classroom teachers 8/9/01
Priority #3	Action Plan	Who & When?
To implement assessment timelines and measurements to determine instructional needs and interventions.	Develop schedule and assessment team. 8/9/01	Classroom, resource, and grade-level teachers

Support Team Members and Schedule

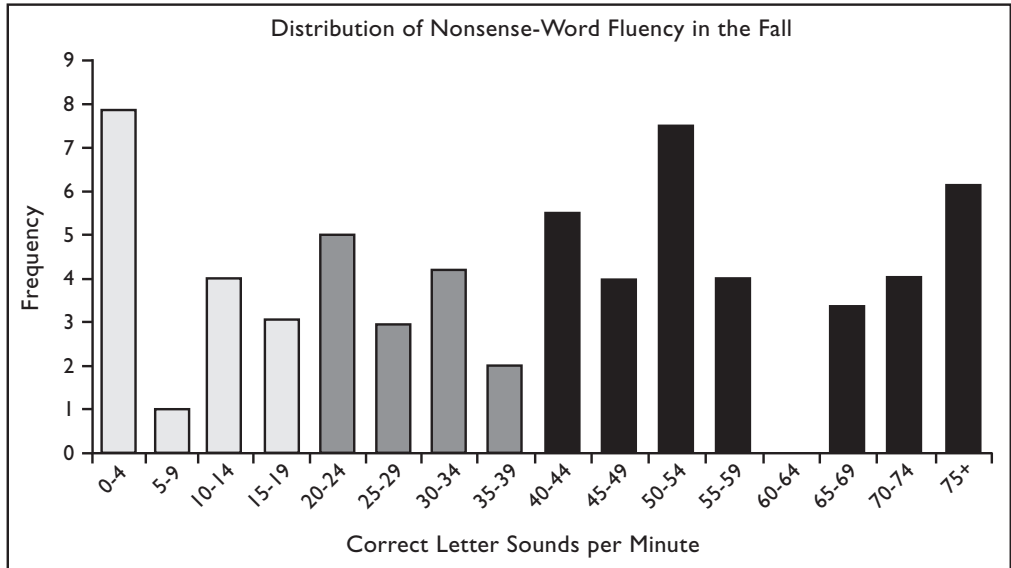
Identify the date, time, and place for the next schoolwide reading meeting.

mark of 40 correct letter sounds per minute. Likewise, a student exiting second grade reading 40 words correct per minute may be identified for more intensive intervention and follow-up, as the end-of-year target for correct words per minute is 90.

Teachers perform “instructional triage” on students by using a process developed by M. R. Shinn, M. M. Shinn, Hamilton, and Clarke (this volume) and elaborated by Kaminski and Good (1998), by assessing student performance on the critical reading skills using DIBELS, and by assimilating other information from teachers. Children

FIGURE 10

First-Grade Fall 2000 DIBELS Nonsense-Word Fluency Histogram Summary



Legend

Solid black = identified 40 or more correct letter sounds in 1 minute (75%)

Diagonal = identified 20–39 correct letter sounds in 1 minute (20%)

Cross hatch = identified fewer than 20 correct letter sounds correct in 1 minute (5%)

who are at greatest risk are identified from those at less risk. To operationalize this process, we use the following criteria.

Students benefiting from benchmark reading intervention. In the following discussion, we assign a label to the type of intervention that is indicated by a student's performance rather than assign a label to the learner. This may appear to be a subtle shift, but it is one we consider important. Our focus is to use the student's performance on indicator measures to help design the type of intervention necessary to change learning outcomes. Therefore we focus on the factor of intervention opposed to learner. Further, we use the term *intervention*, rather than *instruction program* or *practice*, as *intervention* consists of multiple components. These dimensions will be discussed further in Stage III.

Benchmark interventions are those *core* instructional practices and programs provided in general education that position students to meet or exceed commonly agreed-upon reading goals and priorities. By design, they are intended to ensure that the majority of students in a given school achieve adequate (i.e., benchmark) levels of performance. The elements of benchmark intervention vary across schools, but the com-

FIGURE 11

Dynamic Indicators of Basic Early Literacy Skills and R-CBM Benchmark Levels and Goals

MEASURE	BENCHMARK GOAL
Onset-Recognition Fluency Measure (OnRF)	• 25–35 Correct Onsets per minute by <i>winter</i> of Kindergarten
Phonemic-Segmentation Fluency Measure (PSF)	• 35–45 Correct Phonemes per minute by <i>spring</i> of Kindergarten
Nonsense-Word Fluency Measure (NWF)	• 40–50 Correct Letter Sounds per minute by <i>winter</i> of First Grade
R-CBM Measure (ORF)	• 40–60 Words read correct per minute by <i>end</i> of First Grade • 90 Words read correct per minute by <i>end</i> of Second Grade

mon factor is that the majority of students derive adequate benefit to pass school-, district-, and state-level assessments of reading. As a general rule, we suggest that benchmark intervention should prepare 80% or more of the students in a school to read at grade level. The 80% criterion is a logical cut off point. If more than 20% of the students fail to reach benchmarks at designated intervals (see Figure 11), then the core reading program and practices are not adequately addressing the schools' needs. Recent studies synthesized by Lyon and colleagues at the National Institute of Child, Health, and Human Development indicate that 20% of children in schools will experience significant reading difficulties.

Students who attain benchmark performance on critical literacy skills (e.g., 35–45 phonemes per minute by the end of kindergarten) are on track to attain later reading outcomes (Good, Simmons, & Kame'enui, 2001). Students receiving benchmark intervention are monitored three times a year in the fall, winter, and spring to evaluate growth toward common goals. If a child's performance does not maintain adequate growth toward benchmark goals, appropriate interventions are provided.

Students in need of strategic intervention. Students who receive strategic intervention typically are not acquiring and demonstrating foundational reading skills at high levels and rates of success. They may begin moderately below their average-achieving peers in critical areas or may start at adequate levels but fail to progress over time. For

students who are not grasping and applying grade-level reading skills and strategies proficiently and fluently, we recommend more explicit, systematic, and timely intervention and monitoring. In general, strategic intervention is for students who need more than what is typical of the general education curriculum and instruction. Of the 20% of children who are likely to have difficulty in beginning reading, we reason that approximately 15% of students may need additional, strategic instructional support. Students in the strategic intervention group may exhibit mixed performance patterns; that is, some may perform well on one measure but low on another, while others may perform moderately below average on a range of measures. In some schools, students requiring strategic intervention may constitute a large number of students, while in other schools they may be a small number. The goal of strategic intervention is to identify children who are potentially at risk of serious reading difficulty and to provide sufficient systematic instruction so that their performance rapidly reaches and exceeds benchmark levels. Shinn (1997) recommends frequent monitoring for students who are failing to demonstrate adequate rates of progress. In the schoolwide beginning reading improvement model, we monitor students who are receiving strategic intervention monthly.

Students in need of intensive intervention. Intensive intervention is recommended for students who are significantly at risk based on their extremely low performance on one or more big idea performance indicators. The greater the number of measures and the lower the performance across measures, the greater the risk. The need for immediate intensive intervention is even more urgent when students display continued low rates of progress even when provided with strategic intervention. With effective benchmark and strategic instruction in place in the primary grades, it is estimated that approximately 5% of students would need intensive intervention (Torgesen, 2000).

Much like children with serious medical conditions, children in need of intensive intervention in reading are in acute need of early identification, the most effective interventions available, and frequent monitoring to ensure that their reading performance does not remain seriously low. Educators must intervene with a sense of urgency and with the most effective tools and strategies available. Moreover, the intensive interventions should be short-term and temporary, rather like an intensive care unit in a hospital.

As illustrated in Stage II, Student Level of the model, children with similar performance profiles are grouped according to intervention needs (i.e., benchmark, strategic, intensive). The purpose of grouping is to ensure that children are given ample *opportunities* to receive instruction and increased opportunities to respond at their instructional level. As a rule, the number of students who receive intensive instruction should be smaller than that in either the strategic or benchmark groups. Groups should be dynamic rather than static. Strategic, ongoing, and frequent monitoring of performance when students are grouped homogeneously has been demonstrated to contribute to overall achievement effects (Gutiérrez & Slavin, 1992) and is critical for adjusting groups in response to instruction and assessment.

As a rule, approximately 20% of students in the fall would require strategic or intensive intervention. Identifying 20% of children in the fall for intensive intervention

may constitute “overidentification;” however, the consequences of providing extra intervention are considered far less risky than a *wait-and-see* position that withholds opportunity for additional instruction until students are seriously discrepant compared to their peers. In addition to the 20% criterion, we employ research-based guidelines on selected measures that predict success. For instance, a first-grade student who can identify 40 or more letter sounds correctly on the Nonsense-Word Fluency measure in the winter is highly likely to read 40 correct words per minute on R-CBM (Good et al., 2000) in the Spring of Grade 1. The correlational nature of the early indicator measures allows schools and teachers to make high-probability predictions of success and risk. For example, a mid-year first-grader who identifies only nine correct letter sounds on the Nonsense-Word Fluency measure is at serious risk of not attaining the end-of-year first-grade R-CBM benchmark of 40–60 correct words per minute and would warrant more instructional support than students performing in the benchmark range.

Stage III: Design Instructional Interventions

In Figure 12, we summarize the critical features of Stage III, which is arguably the most critical and complex component of the schoolwide beginning reading model—intervention. Of foremost importance to the model is the instructional fit of the instructional reading intervention within the school’s host environment; therefore, schools invest serious and sustained energy at this stage. Stage III decisions focus on (a) specifying and implementing core instructional interventions, and (b) customizing strategic and intensive interventions for students who are not benefiting adequately from the core curriculum or are at high risk of reading difficulty.

Designing a core instructional intervention. Two principles guide decisions in Stage III: (a) intervention is bigger than program alone, and (b) identification and implementation of a research-based core intervention provides the highest probability of success in the host environment. A common misperception is that once a commercial program is identified and adopted, the reading intervention is “determined.” Commercial programs constitute a critical component of a schoolwide model, but as documented in the Stage III figure, core intervention encompasses far more than the adoption of an instructional program. The entire core intervention begins with the review and adoption of grade-level goals. These goals may be state- or locally mandated standards; in some cases they may be school-determined. Specifying grade-level expectations for all students is fundamental to core intervention and provides the basis for other decisions. For example, if a kindergarten content standard is that students will be able to segment 2- and 3-phoneme words, core instructional programs should address this standard adequately and fully. Moreover, standards should specify the level of performance students should achieve. An example first-grade performance goal is for students to be able to read orally 60 correct words per minute on grade-level text. Goals specification is a critical dimension of the schoolwide inventory conducted in Stage I and many schools in which we work allocate significant time specifying expectations for K–3 reading.

FIGURE 12**STAGE III:**
Design Instructional
Interventions

School Level	
Design Core Instructional Interventions	
• Specify the following:	
Goals	
Core Curriculum Program	
Time for Reading	
Instructional Grouping and Scheduling	
Instructional Implementation	
Progress-Monitoring System	

Student Level	
Customize Intensive and Strategic Interventions	
Goals	
Core or Specialized Curriculum Materials	
Time for Reading	
Instructional Grouping and Scheduling	
Instruction	
Progress-Monitoring System	

Once goals are specified and the magnitude of the school's need is evaluated in relation to the goals, school teams design the optimal school-level intervention that fits their host environment. School teams consist ideally of all professionals in the school who are responsible for reading achievement, including the general education teachers, school administrators, school psychologist, speech and language specialist, Title I or reading support teacher, etc. In Stage III, school teams essentially move beyond the

question of “What does reading instruction look like in our school?” to “What should reading instruction look like in our school?” Critical decisions such as time allocations for reading, instructional grouping procedures, who delivers instruction, where it is delivered, and so on are considered and specified explicitly. Schools invest considerable time designing this intervention map, document their plan of action in writing, and review this map at critical decision points throughout the year. In essence, the outcome of Stage III is an intervention map that specifies what core instruction looks like for students in Kindergarten, Grade 1, Grade 2, and beyond.

Central to the instructional map is the selection of the research-based core program that fits the host environment. From the outset, schools are encouraged to review commercial programs that have solid, scientific evidence and that produce strong and positive results for children when implemented faithfully. A short list of research-based commercial programs is currently available (Editor, *American Educator*, 1998); however, the new generation of programs holds great promise because of their attention to research-based findings documented in NICHD research, summarized and synthesized by the National Research Council (1998) and the National Reading Panel (2000), and mandated by populous states such as California and Texas. From the short list, we encourage schools to (a) review scope and sequences; (b) conduct a discrepancy analysis with school-adopted expectations; (c) compare programs within the list to identify the one that aligns most closely with the needs of students, the instructional priorities, and the school environment; (d) pilot the program with faithful implementation; (e) monitor student performance; and (f) evaluate performance toward key early reading outcomes.

Through our work in schools and districts, we find that a site-based reading coordinator (e.g., a Title I teacher, school psychologist) greatly facilitates schoolwide beginning reading improvement coupled with strong administrative leadership. The site coordinator and principal work with collaborative grade-level intervention teams in initial intervention development and adaptation. Throughout the intervention process, collaborative intervention teams construct or customize the intervention from a menu of validated options. It is this “fit” within the school that further distinguishes this model from more traditional reading models.

Customize intensive and strategic interventions. With the core reading intervention specified, the next set of decisions involves how to *customize* interventions for students who are not benefiting adequately from that core intervention or for children who enter with high levels of risk on the big idea early reading indicators. Questions such as “Can the core commercial program be used, but in smaller groups?” “Could the student benefit from more instruction either through a longer period or an extra period of instruction, but with a different program?”, “Could preteaching critical lesson components such as new phonic elements or story vocabulary result in adequate progress?” These questions relate to customization. In some cases, students may require a specialized and intensified program that focuses prominently on the big ideas of early reading. In other cases, customization may involve adding a second reading period. The degree and kind of customization must be determined at the school level and governed by school resources of time, programs, and personnel.

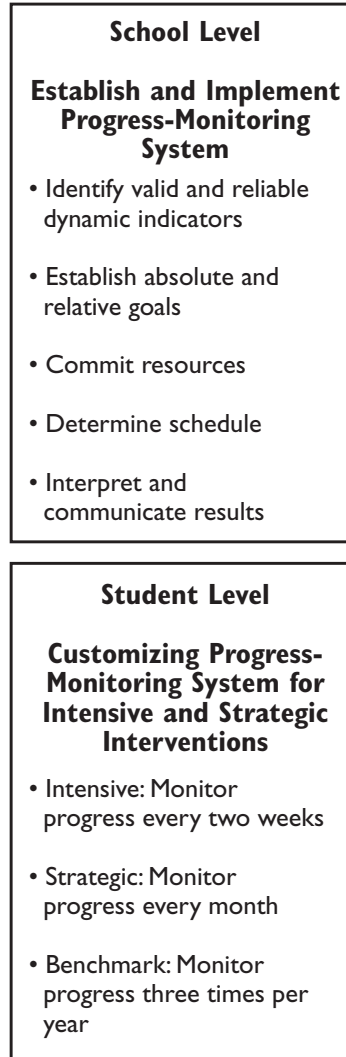
Stage IV: Set Goals and Monitor Progress Formatively

The efficacy of the schoolwide model hinges largely on the ability of a school to document whether students are learning enough (Carnine, 1997). In Stage IV, schools assess *all* students' reading progress and evaluate *each* student's progress. A school's ability to document and act upon individual student performance dynamically, reliably, and formatively distinguishes it from the majority of schools in the traditional educational system. Although norm-referenced, commercially published measures of reading achievement do an adequate job of documenting groups of learners' performance at a given point in time (e.g., spring), the purpose of these measures was never to inform instruction for individual learners or to monitor performance. Moreover, these measures were never intended to monitor progress frequently and formatively over time.

Establish and implement a progress-monitoring system. A key feature of the Schoolwide Beginning Reading Improvement Model is the essential linkage between assessment and instruction. This linkage is predicated on a simple but vital proposition: We have valid, reliable, and efficient (one minute to administer) measures that, when given early in a child's beginning literacy experience, serve as powerful predictors of later reading success or risk. Moreover, when these measures are administered frequently, they can document student progress or lack thereof. For any school seriously interested in serving *all* students, which requires serving *each* and every student, this is a powerful proposition with practical implications.

An effective and efficient progress-monitoring system consists of five critical factors: (a) reliable and valid measures with alternate forms that can be administered frequently, (b) established *absolute* and *relative* learning targets to evaluate whether the rate and slope of learning is adequate, (c) resources and personnel to prepare assessment materials, administer and score measures, and enter data, (d) a confirmed and commonly agreed-upon schedule for collecting data, and (e) an efficient process for analyzing, summarizing, and reporting data to constituencies and for using student performance to inform instruction. Integrating assessment and instruction is not a novel concept and has long been a signature of effective special education (Deno, 1992; D. Fuchs & L. Fuchs, 1994). What is innovative and effective about this process is that the technology can be applied at the school level in time to catch children before they fail (Torgesen, 1998). At the present time, Good, Kame'enui, and Simmons are building and refining a website through which schools enter DIBELS and R-CBM data and immediately receive reports of student performance at classroom, school, and district levels. Information from these reports includes the percentage of students at benchmark, strategic, and intensive intervention levels and class profiles delineating the individual performance of each learner across measures.

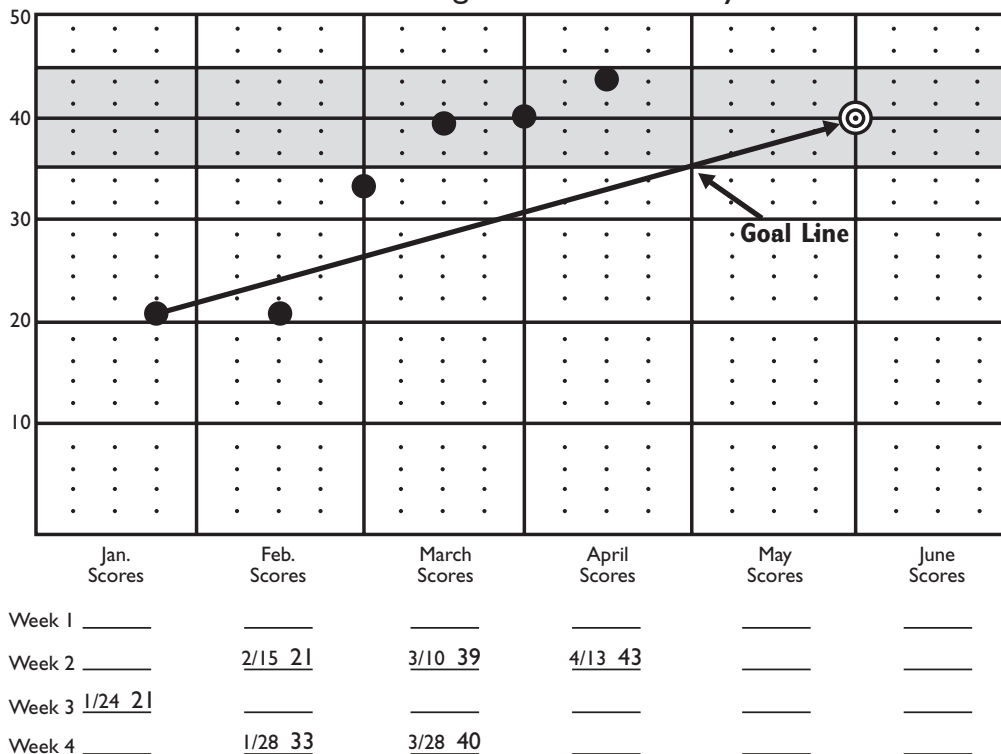
In summary, in the upper box of Figure 13, on page 558, we highlight the schoolwide system of monitoring student performance as an essential element in a beginning reading improvement model. In the bottom box of Figure 13, we outline how to use the formative assessment system for students who are at greater risk of reading failure than the majority of children in the school.

FIGURE 13**STAGE IV:**
Set Goals and Monitor
Progress Formatively

Customize progress-monitoring system for intensive and strategic interventions. For children who are at risk of reading difficulty or for those whose reading performance is not within “acceptable” zones of proficiency, we recommend frequent progress monitoring. For frequent progress monitoring, we use the same measures used in schoolwide assessment. The primary difference between the schoolwide and customized progress monitoring is the frequency of administration and analysis. At the school level, all students are assessed quarterly on critical performance indicators to

FIGURE 14

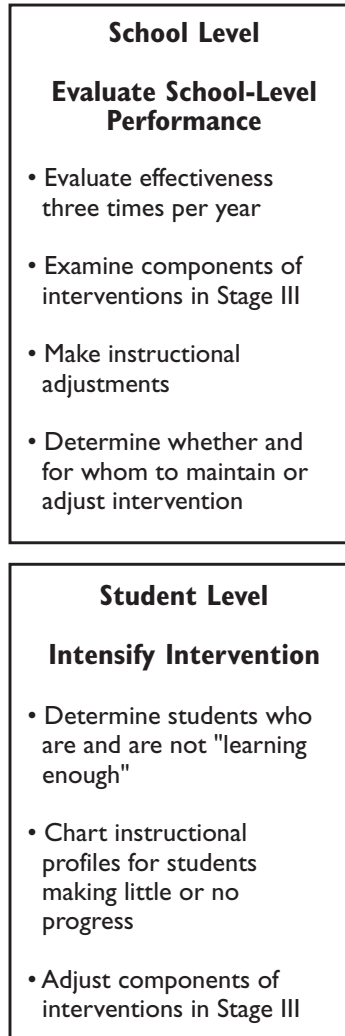
Kindergarten Example of Progress Monitoring on the Phonemic Segmentation Fluency Measure



determine their progress toward goals. Students in strategic interventions are monitored monthly, and students in intensive interventions are monitored more frequently (e.g., every 2–4 weeks). Learning targets are established, and each learner's performance on target goals is documented. Figure 14 depicts one kindergarten student's monthly progress on the Phonemic-Segmentation Fluency measure. The student whose performance is reflected in Figure 14 was identified at the beginning of the year as needing intensive intervention based on his performance on Onset-Recognition and Letter-Naming Fluency measures. As indicated in the graph, he met the end-of-kindergarten goal of 35–45 phonemes per minute in March and continued to make progress through April. Through monthly monitoring, teachers can evaluate each child's progress precisely and adjust instruction as needed.

Stage V: Evaluate Intervention Efficacy and Adjust Instruction

In the final stage of the model (see Figure 15, on page 560), the effects of intervention conducted in Stages I–IV are evaluated directly and interventions are intensi-

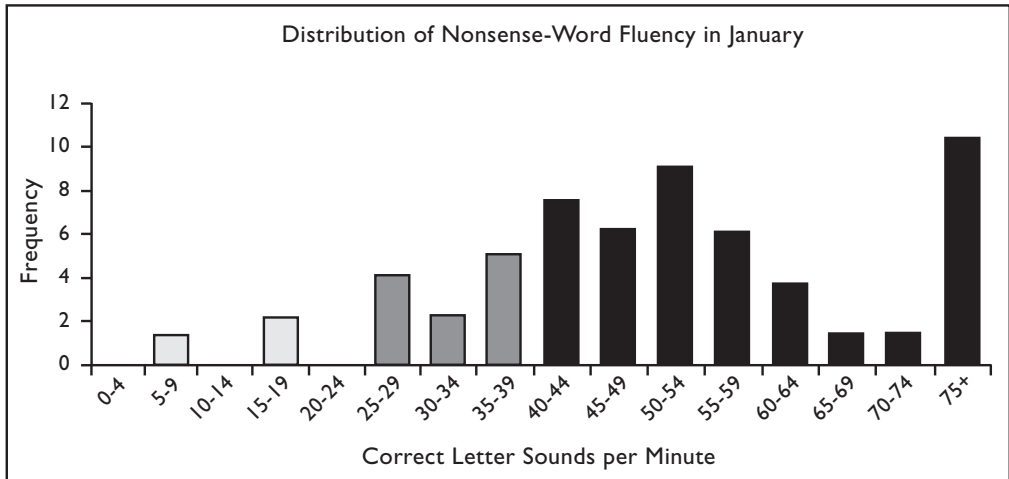
FIGURE 15**STAGE V:**
Evaluate Intervention
Efficacy and Adjust
Instruction

fied as indicated by student performance. In this stage, schools address the following questions: "Are the instructional interventions working for the full range of learners? Are students learning enough? What instructional adjustments must be made to enhance beginning reading performance?"

Evaluate school-level performance. In the Bethel Reading Project, each school evaluates the performance of all students three times a year on big idea early reading

FIGURE 16

**The Number of Correct Letter Sounds Correctly Identified by 54
First-Grade Students in January 2000**

**Legend**

Solid black = identified 40 or more correct letter sounds in 1 minute (75%)

Diagonal = identified 20–39 correct letter sounds in 1 minute (20%)

Cross hatch = identified fewer than 20 correct letter sounds correct in 1 minute (5%)

indicators. Progress is reviewed at each grade to evaluate the efficacy of the instructional intervention in the respective grades. Classroom teachers also receive summaries of students in their classrooms to identify specific children who need more effective instructional interventions.

The histogram in Figure 16 displays the performance distribution of all first-grade students in one school ($N = 54$) on the Nonsense-Word Fluency measure. The target goal for first graders in January is 40–50 letter sounds per minute. As illustrated, 75% of students in the school met the target. Another 20% demonstrated emerging letter-sound knowledge (i.e., 20–39 letter sounds per minute). Five percent, or three children in this school, identified fewer than 20 correct letter sounds in one minute and are considered to have marked difficulty with the alphabetic principle.

This indicates that a relatively small percentage of children (i.e., cross-hatched bars) are at serious risk of difficulty as judged by students' ability to identify letter sounds. This is important information because it allows schools to reallocate instructional resources for children who have not made sufficient progress. The information from this performance period may also be compared to performance in the previous assessment period to determine how much growth has occurred. In essence, by comparing performance over time, schools can address the question, "Is the instructional intervention working?"

TABLE 1**Percent of Students in Each Level Based on
Nonsense-Word Fluency (N = 387)**

	At Risk—Deficit (0-19)	Emerging (20-39)	Established (40-60)
September 1999	47%	36%	17%
January 2000	5%	20%	75%

Table 1 compares the performance of first-grade students in the entire district (i.e., six elementary schools) on the Nonsense-Word Fluency measure at two points in the year: September 1999 and January 2000. Comparative performance data indicate that students in the district made significant progress, since 75% attained the benchmark. Moreover, the findings inform schools and teachers to concentrate energy on the 25% of students who did not reach the benchmark of 40 letter sounds per minute.

When a large number of students fail to reach target benchmarks (e.g., 40-50 letter sounds per minute), school teams return to the instructional interventions planned in Stage III. First, school teams evaluate critical dimensions of the core intervention to identify the source of the difficulty. First-order questions include:

1. Was the intervention implemented as planned or prescribed?
2. Did students receive the amount of intervention specified for the time allocated?
3. Were there high rates of absence for many learners?
4. Did the size of instructional groups permit adequate opportunities for students to respond?
5. Was progress monitored frequently to evaluate learning?

If a review of the core dimensions of intervention indicates one or more deviations from what was planned, procedures should be put in place to increase the fidelity of the planned intervention. If analysis reveals that all intervention components were implemented as planned, school teams should review the list of alterable variables to determine what and how much to intensify. If performance trends are positive and adequate for all but a few children, then large-scale intervention adjustment is not warranted. Only if many students are failing to progress adequately is full review and adjustment of the core intervention components necessary.

Intensify intervention. In Stage V, each classroom teacher reviews performance data at each of the three assessment periods to determine whether specific children have an inadequate rate of reading growth to attain targeted proficiency goals on critical measures of early reading. From this information, teachers assess each child's performance on multiple measures to determine whether the student's performance is deficit, emerging, or established. Instructional recommendations are then based on the number of essential skills on which the student is experiencing difficulty and the magnitude of their educational need. The following winter report for a first-grade class illustrates a mid-first-grade goal of 35–45 phonemes per minute on the Phonemic Segmentation Fluency measures and 40–50 letter sounds per minute on the Nonsense-Word Fluency measure (see Figure 17, on page 564). In this class, nine children (e.g., John, Gillian, Beth) are benefiting from benchmark instruction. Benchmark instruction is the instructional recommendation for all children who score (a) 35 or more on phonemic segmentation, *and* (b) 40 or more on nonsense word fluency. Four children require strategic intervention. The criteria for recommending strategic intervention are (a) 11–34 on phonemic segmentation fluency, or (b) 20–39 on nonsense word fluency, or (c) less than 10 words correct per minute on oral reading fluency, or (d) any combination of a, b, or c. Four children are recommended for intensive intervention. The criteria for intensive intervention include scores of (a) less than 10 on phonemic segmentation fluency, (b) less than 20 on nonsense word fluency, or (c) less than 10 on oral reading fluency.

In addition to evaluating absolute performance (i.e., where a student scores at one point in time), it is important to evaluate growth and the nature of performance differences. For example, although Suzy and Mandy both are recommended for intensive intervention, Suzy made enormous growth on phonemic segmentation from fall (0) to winter (58) and on nonsense words (from 0 to 39). Yet, she read only four words correct in the Oral Reading Fluency passage; hence, the reason for the intensive intervention recommendation. Mandy, however, grew from 10 to 19 on phonemic segmentation and from 4 to 15 on nonsense words. Though the intervention recommendation is for both children, the type of instructional focus would differ.

As indicated in the Student Level component of Figure 17, determining how to intensify intervention is essential in Stage V of the Schoolwide Beginning Reading Improvement Model. A first-order question for students identified as being in need of intensive and strategic intervention is, “Have these children been enrolled in the school and received instruction?” or are there obvious attendance and enrollment issues that shed light on their low progress or performance levels? Answers to these questions may explain the differential progress rates of children such as Suzy and Mandy. If low performance cannot be explained by attendance factors, teachers then review and intensify levels of intervention to increase the probability that students will attain adequate levels of proficiency. Common adjustments used to intensify intervention are (a) increasing the amount of time by providing double doses of reading instruction, (b) reducing the size of the instructional group, (c) using a more specialized and explicit instructional program, and (d) monitoring progress more frequently. A table of alterable components and specific adjustments is shown in Table 2, on page 565.

FIGURE 17

First-Grade Winter DIBELS and R-CBM
Benchmark Teacher Report

Student	Letter Naming		Phonemic-Segmentation Fluency		Nonsense-Word Fluency		Oral Reading Fluency		Instructional Recommendation Based Primarily on Nonsense Word Fluency
	Fall	Winter	Fall	Winter	Fall	Winter	Fall	Winter	
Andy	22	50	16	50	33	38	Emerging	11	Strategic instruction
John	31	62	13	62	42	66	Established	42	Benchmark instruction
Suzy	6	58	0	58	0	39	Emerging	4	Intensive instruction
Erin	42	23	0	23	29	37	Emerging	18	Strategic instruction
Gillian	44	56	28	56	47	52	Established	23	Benchmark instruction
Beth	57	49	25	49	27	56	Established	46	Benchmark instruction
Joe	16	47	1	47	32	50	Established	7	Strategic instruction
Mandy	20	19	10	19	4	15	Emerging	7	Intensive instruction
Sarah	55	47	55	47	59	70	Established	36	Benchmark instruction
Fred	46	42	22	42	45	62	Established	74	Benchmark instruction
Neil	39	40	31	40	35	53	Established	27	Benchmark instruction
Stewart	40	40	14	40	13	14	Deficit	13	Intensive instruction
Deborah	24	24	17	24	39	17	Deficit	13	Intensive instruction
Edward	50	50	48	50	49	48	Established	49	Benchmark instruction
Katie	72	72	57	72	40	57	Established	40	Benchmark instruction
Josh	63	63	31	63	50	31	Established	50	Strategic instruction
Dave	36	50	24	50	35	49	Established	27	Benchmark instruction

Teacher: Mrs. Smith

District: Oregon School District

Grade: 1

School: Anywhere Elementary

TABLE 2

**Alterable Components and Specific Adjustments
Used to Intensify Intervention**

Alterable Components	Specific Adjustments				
Opportunities to Learn	Develop plan to increase attendance	Ensure instruction is provided daily	Increase number of opportunities for learner to respond	Increase teacher- directed instruction	Add another instructional period (double dose)
Program Efficacy	Preteach components of core program	Use materials that are extensions of the core	Supplement program with appropriate materials	Replace current core program	Implement specially designed program
Program Implementation	Model lesson delivery	Monitor implementation frequently	Provide coaching and ongoing support	Provide additional staff development	
Grouping for Instruction	Check to see students are appropriately placed	Reduce number of students in group	Provide individual instruction	Change instructor	
Coordination of Instruction	Clarify instructional priorities	Establish concurrent reading periods/ sessions	Provide complementary reading instruction across reading periods	Establish a communication system across instructors	

Summary of the Schoolwide Beginning Reading Improvement Model

Schoolwide beginning reading improvement involves the integration of two complex systems: (a) the scientific knowledge base of reading in an alphabetic writing system and (b) the design and implementation of the knowledge base in a complex host environment (i.e., schools) comprising people, practices, pedagogy, and policy.

We advocate that the *processes* and *procedures* required to effect and sustain reading improvement are fundamentally the same whether the school is in Los Angeles, California or Eugene, Oregon. The translation of the knowledge base of beginning reading from the research literature to practice in schools is built on and nurtured by

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for Academic and Behavior Problems II: Preventive and Remedial Approaches

a common set of components operationalized in the five stages of the Schoolwide Beginning Reading Improvement Model.

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AUTHORS' NOTE

The contents of this document were developed in part for the Office of Special Education Programs, U.S. Department of Education under Contract Number H324M980127. This material does not necessarily represent the policy of the U.S. Department of Education, nor is the material necessarily endorsed by the federal government.

We gratefully acknowledge and warmly thank the dedicated, hard-working, and enthusiastic Bethel District elementary administrators, teachers, and educational assistants who so expertly implemented the Schoolwide Beginning Reading Model. We extend a special thanks to the reading coordinators for their leadership and persever-

ance. Their collective sustained efforts are realized in the reading growth of children in the Bethel School District. We further acknowledge the contributions of Katie Tate in her expert preparation of this manuscript.

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