

Implementing and Sustaining a Middle and High School Reading and Intervention Program

Linda Diamond

Executive Vice President, CORE

For secondary-level students in grades seven through twelve, the social and economic consequences of not reading well can be cumulative and profound: the failure to attain a high school diploma, a barrier to higher education, underemployment or unemployment, and difficulty in managing personal and family life.

Southwest Educational Development Laboratory, 2000

Our middle and high schools are facing a literacy crisis of monumental proportions. Too few students enter with the skills they need to complete grade-level work. All too many leave unmotivated, with limited futures and promises unrealized. While blame can be assigned to social conditions and to unproven reading instructional practices in the elementary grades, middle and high schools cannot wait for a well-prepared entering class. They cannot wait for students who come to them from literate homes, well nourished, and speaking fluent English. On the contrary, the population entering middle and high school today, and surely continuing to enter middle and high school in the future, is more diverse than ever. These diverse learners depend almost entirely on the schools for their educational success. Who are these students with great need? Some are students with mild learning disabilities for whom regular classroom teachers are responsible. Some are students whose primary languages are different from the language of the classroom. Many are “skilled evaders of reading, who know the stress of not being able to read successfully” (Peterson, Caverly, Nicholson, O’Neal, and Cusenbary, 2000). These are the students who

demonstrated poor reading ability in third grade; national longitudinal studies show that about 75% of students with reading problems in third grade will have them in ninth grade (Shaywitz et al. 1999). In fact, the research shows that the gap between good and poor readers actually widens in later grades. Mikulecky studied a group of secondary students two or more years behind their peers in reading ability and found that they actually experienced declines in reading comprehension over the two-year period of the study (Mikulecky, 1990). In addition to poor academic achievement, these students suffer emotional and psychological consequences from their reading problems, including low motivation, anxiety, and lack of self-efficacy (Wigfield and Eccles, 1994). They also manifest behavior problems, although the relationship is unclear. Some studies have actually found reading difficulty to cause behavior problems rather than the other way around. Finally, the movement to curriculum standards and high-stakes exams, while important steps for improving overall student achievement, make the middle and high schools' task all the more challenging. For without effective strategies for teaching students with diverse needs, high standards merely highlight the limitations of teachers and the failure of schools.

To ensure achievement for diverse learners, middle and high schools must design programs and curriculums that take into account a lack of background knowledge, delayed language development, and limited successful reading experiences. This means that middle and high schools will need to design programs of intensive intervention for the least prepared, a sort of educational triage with well-run intensive care units. In addition, middle and high schools will need to plan other curriculum interventions of lesser intensity, and will need to help all teachers reach an increasingly diverse population. In order to plan effectively, it is useful to think of four types of learners with different needs for curriculum, instruction, intensity, and duration (Kame'enui and Simmons, 1999). Table 1 summarizes these learners, their characteristics, and their curriculum options.

Table 1. Four Learners

Learner	Characteristics	Curriculum and Assessment
Advanced	<ul style="list-style-type: none">▪ May already know much of the content▪ At or above grade-level standards▪ Benefits from opportunities for elaboration▪ May appear bored	<ul style="list-style-type: none">▪ Advanced classes▪ Extended opportunities within the regular program▪ Enrichment
Benchmark	<ul style="list-style-type: none">▪ Generally can meet standards▪ Average learner▪ Can adapt and adjust to teacher's style	<ul style="list-style-type: none">▪ Regular program (about two periods in MS)▪ "Well-checks" every 5–8 weeks▪ Occasional in-class modifications▪ Proven vocabulary and comprehension strategies instruction
Strategic	<ul style="list-style-type: none">▪ Typically tests between the 30th and the 49th percentile on normative measures▪ Gaps in skills and knowledge▪ 1–2 years behind▪ Can basically read but not with depth▪ Does not apply him/herself and may appear unmotivated▪ Content area work may be challenging▪ May not complete homework	<ul style="list-style-type: none">▪ May be in regular core program (usually two periods) with added support (back-up) class▪ Targeted intervention▪ Separate reading intervention of 1–2 periods, replacing English class, but for a short time (semester)▪ Added tutoring period▪ "Well-checks" every 3–5 weeks
Intensive	<ul style="list-style-type: none">▪ Tests below the 30th percentile on normative measures▪ Very low performance▪ Reading skills are very limited▪ Very frustrated and unmotivated▪ Demonstrates behavior and absentee problems▪ Cannot handle content area work▪ Does not turn in homework	<ul style="list-style-type: none">▪ Separate intensive intervention of at least 2 hours replaces traditional English class plus something else for 1–2 years▪ "Well-checks" every 1–3 weeks▪ Explicit, systematic instruction and direct instruction

Middle and high schools will need to design their programs with these different learners in mind. Presently, most middle and high schools are designed to meet the needs of benchmark learners, with a few honors classes thrown in for the advanced learners in high schools. Only students formally identified as qualifying for special education receive specialized help, and the help they receive may not be adequate. To meet the needs of all students, middle and high schools will want to rethink their organization and schedules, their teacher skills and knowledge, and their curriculum materials and programs. It is crucial to implement well-designed intervention classes

(replacing the regular English class) of sufficient duration (usually two periods at least) to lift the intensive learners (more than two standard deviations below the mean) to basic literacy within two years. While some consider this tracking, others recognize it as the only way to meet the needs of significantly below-level students. In addition to this intensive intervention, middle and high schools can add support classes for students in the core curriculum (untracked classrooms) who are only one to two years behind their peers—the strategic learners. In fact, in order to complete the comprehensive curriculums most good publisher programs now provide to middle schools, two periods are needed by all students. Finally, middle and high schools can support all teachers in learning to use more powerful research-based strategies for helping all students in all content areas develop vocabulary and comprehend text.

The successes of Chipman Middle School in Alameda, California illustrate how a carefully planned, multi-pronged approach to literacy instruction can result in significant increases in the skill levels of struggling readers. The key components of Chipman's model, which was developed in consultation with the Consortium on Reading Excellence (CORE), included identifying students in three of the categories listed in the chart above: benchmark, strategic, and intensive. With the guidance of CORE staff, a carefully coordinated team of administrators and teachers received both ongoing professional development and coaching, in accordance with the principles outlined in this paper. As a result, the percentage of students at Chipman who were reading below grade level dropped from nearly 50 percent to 38 percent over two school years. Given the success of this model, the school district adopted it for all schools serving students in grades 6–12.

Effective reading intervention programs exist with proven track records, yet just implementing these research-based programs may not be sufficient to produce significant gains in student performance. Leslie McPeak and Frank Smith, educators from the Stanislaus County Office of Education in California, document six reasons that implementing research-based reading programs may fail (McPeak and Smith, 2001).

1. Not all teachers involved receive sufficient in-service training to successfully teach the new program.
2. Coaching is not provided during the year to support implementation.
3. The grouping and scheduling requirements of the selected program were not followed.
4. The program is not implemented with sufficient intensity to catch students up quickly.
5. Teachers do not monitor progress frequently enough.
6. Too many initiatives interfere with effective implementation of the reading program, diffusing time, resources, and support.

Three components are critical to the design, implementation, and sustainability of reading interventions for the average middle and high school to overcome these problems: effective professional development to equip educators with a solid knowledge base; effective instructional tools aligned to the knowledge base; and significant systemic reorganization and support. In addition, middle and high school staffs will have to seriously rethink the current popular reform models, most of which do not sufficiently improve literacy for our most vulnerable students and, in fact, may actually impede successful program implementation.

The Pasadena Unified School District in Southern California created a new literacy program based on all of these components. CORE consultants helped administrators and teachers at the middle schools and high schools choose intervention materials for students who were reading more than two years below grade level. The consultants also helped school staff plan for placement and scheduling of students and the training of teachers during the summer before the initial implementation. The district held multi-day intensive, instructional sessions for teachers working with various reading programs, including *Holt Literature*, *Language!*, *REACH*, *Read 180* and, for English Learners, *High Point*. Literacy coaches at each site were given additional training by CORE consultants in the content and approaches of the various reading programs as well as in the skills and responsibilities needed to be effective literacy coaches. Ongoing support—with coaching, demonstration lessons, and classroom observations—was provided for each site and for each of the reading programs. In addition, a literacy coordinator for the district

ensured that resources were available throughout the system to meet the needs of participating schools.

Professional Development

Professional development is critical to equip teachers and school leaders with the research-based knowledge they need to design their reading programs, select the right tools, and develop support systems. The most effective school implementation designs will take into account the need for ongoing professional development in order to create and sustain a culture of continuous learning and continuous improvement. The targeted audience should be the teachers who will teach an intervention class as well as those content area teachers who would benefit from improved strategies to help students develop vocabulary and comprehension. To facilitate ongoing learning, teachers need time to learn. Professional development needs to be multidimensional to be effective. Effective professional development will take into account teacher background, the school culture, and the particular needs of adolescents. Some professional development will occur in traditional workshop settings and seminars, some will take place at the school during collegial meetings, and some will take place within the classroom. In *The New Structure of School Improvement: Inquiring Schools and Achieving Students*, Joyce, Calhoun, and Hopkins (1999) describe an approach to staff development vastly different from the workshop training packages employed by most schools. They argue for five major components.

- **Presentation of Theory** Participants need to learn the theoretical underpinnings of the teaching approach. This component is the traditional workshop and consists of readings, lecture, discussion, and interaction. Since reading instruction is complex and most middle and high school teachers have not been taught to teach reading, 20 to 40 hours may be required to provide teachers and school leaders with the necessary understandings (Joyce and Showers, 1982). For a particular intervention program, the theory should be connected directly to the program materials. For middle and high school teachers the theory presented must include adolescent learning issues as well. If presentation of theory is the sole component of training, however, as few as 10 percent of the participants are

likely to be able to implement the new approach (Joyce et al., 1999). Ongoing support and mentoring are essential to implementation success.

- n ***Modeling and Demonstrations*** Modeling of the instructional procedures and demonstration lessons will increase the likelihood of implementation. Demonstrations and modeling can be presented live or through the use of videotapes, but it is crucial that teachers expected to implement a new strategy or program see effective illustrations. Modeling and demonstrations should take place during visits to actual classrooms. The model lessons may be provided by outside experts as well as by skilled teachers from the school itself. For intervention programs, it is important that demonstration lessons come right from the material selected. When this component is added to the theoretical training, another 10 to 15 percent of the participants are likely to be able to implement the practice (Joyce et al., 1999).
- n ***Practice in Workshop Settings and Under Simulated Conditions*** In addition to seeing models and demonstrations within the classroom, participants benefit from simulated practice in the workshop setting. Such practice, done with peers or students brought in for the session, provides participants with a controlled environment for learning without worrying about managing the whole class of students. Teachers can make mistakes and improve.
- n ***Structured Feedback*** Structured feedback helps all new learners to correct and adjust their behaviors. To provide such feedback, a system for observing participant behavior is critical. Those giving the feedback need to know what to notice. Feedback can be self-administered, or it can be provided by the outside trainer or by skilled colleagues. It can be combined with the simulated practice in the workshop setting and offered during classroom visitations and observations. Joyce et al. state that even with a combination of practice and feedback, they would be surprised “if as many as 20 percent” of participants could transfer their learning to their classrooms on a regular basis (Joyce et al., 1999). When structured feedback is combined with theory, modeling, and practice, the total implementation rate may increase to about 40 percent.

ⁿ ***Coaching for Classroom Application*** When the first four training components are combined, the implementation rate is strengthened considerably. However, for sustained, consistent use, the most important component of training appears to be direct coaching in the classroom. In an earlier study of transfer of training to classroom implementation and consistent use, Joyce and Showers (1982) found that no teachers transferred their newly learned skills without coaching. Coaching involves helping teachers plan and deliver lessons using the new approach. It includes modeling, side-by-side teaching, and helping teachers to reflect upon their own teaching and to make improvements. Coaches, whether outside experts or peers, must themselves receive training and support in the use of observation tools and feedback techniques. When coaching is added, implementation rates go up significantly—as high as 90 percent.

The implementation plans created by the Pasadena Unified School District and Chipman Middle School show the importance of a professional development strategy that is based on sound principles, with approaches that can be tailored to fit the specific needs of a school or district. Pasadena's professional development plan focused on building capacity within the schools. District leadership wanted all secondary-level content-area teachers to improve their understanding of vocabulary and comprehension strategies so that they could attend more effectively to the reading skills of their students. However, instead of sending hundreds of teachers to outside training, the district collaborated with CORE to train a cadre of coaches and other teacher leaders within the schools. First, the selected teachers attended one-day seminars in which they studied the learning processes involved in vocabulary and comprehension skill development. Later, they participated in one-day follow-up sessions during which they deepened their own learning and received materials that they could use in training other teachers and school staff members. Finally, all took part in a half-day follow-up session that required them to apply their recently acquired understanding to their own teaching. During this workshop, all participants practiced modeling new instructional strategies and developed implementation plans for teaching the new strategies to fellow staff members—plans that included demonstrating the strategies in select classrooms for their peers to observe.

At Chipman Middle School, one aspect of the professional development program focused on EL (English Learner) instructors who, like many secondary teachers, had received little training in phonics or blending techniques. CORE held a workshop devoted to these two areas and followed up with demonstrations in each classroom, using the school's newly adopted instructional materials. On a follow-up visit, as the EL teachers demonstrated what they had learned, CORE consultants observed them and provided feedback. In this collaborative atmosphere, teachers in the process of developing new skills and employing new approaches were able to do so in a non-threatening environment. Ongoing discussions allowed teachers to share their concerns and learn from each other. As their skills improved, so did their attitudes about the new instructional tools, along with their confidence in using them.

Instructional Tools

In addition to a training design that should include the components listed above, teachers need the best possible instructional tools. Not all reading programs or reading intervention programs are alike. Many published programs claim to be based on research; few, however, actually live up to that claim. The Southwest Educational Development Laboratory published a summary of the research on effective reading intervention program resources for secondary students (Peterson et al., 2000). Research indicates that for secondary students, effective programs will address the following four components:

1. *Motivation to read* This refers to intrinsic motivation to want to read and read widely.
2. *Decoding skills and fluency* This includes basic decoding skills and fluency.
3. *Language comprehension* This includes linguistic knowledge, morphemic knowledge, and semantic and syntactic knowledge.
4. *Text comprehension* This includes teaching students how to be active with text and make personal connections, how to make inferences and activate background knowledge, and how to interact with different types of texts.

Traditionally, secondary reading intervention has focused on comprehension rather than on decoding. This has occurred because struggling readers most often manifest comprehension weakness; however, the underlying causes generally have not been treated. That is why comprehension interventions alone may result in short-term gains that are not sustained and do not transfer (Kulik, Kulik, and Bangert-Downs, 1990). Research clearly supports the need for programs that address the four components noted above. Middle and high school staffs should use the research on effective reading instruction for older students to select program materials.

■ ***Motivation to read*** Proficient readers tend to read widely. They do so because reading is not laborious and because they find reading rewarding. As students move up the grades, their motivation to read declines (Guthrie and Wigfield, 2000). For unsuccessful readers, reading is associated with failure. The older struggling reader doesn't like to read, and therefore avoids reading. Thus the amount of actual reading practice these students get is very low. For these students it is especially important to design programs that include materials students can read successfully but are age-appropriate, as well as to provide newspapers and magazines for real-life reading opportunities and for choice. It is also important to help students select their own materials and to match students to appropriately readable text. Programs need to help teachers understand how to build a classroom climate that fosters student motivation, how to establish effective independent reading programs, and how to monitor student reading.

■ ***Decoding skills and fluency*** Well-designed reading intervention programs will include instruction in basic decoding skills. Most scientific research indicates that a core linguistic deficit is at the heart of reading problems (Catts et al., 1999; Shaywitz et al., 1999). Regardless of age, when an individual's reading comprehension lags behind listening comprehension, word recognition problems are generally the root cause (Shankweiler et al., 1999). By middle and high school, even the most struggling reader has learned to read some words by sight. Yet most often these words are irregular, high frequency words; these students have not internalized the basic sound-symbol relationships of English to be able to use that knowledge to figure out unfamiliar words, and have not become sufficiently automatic at a large enough number of words to lead to

fluent reading of connected text. Basic decoding depends on recognition of letters and phonemic awareness (awareness of the smallest sound units of language) and on the ability to manipulate phonemes to decode and to spell. In one study of struggling high school students, Shankweiler, Lundquist, Dreyer, and Dickinson (1996) found that differences in phonological processing accounted for differences in text comprehension. While these readers could map phonemes to print, they had difficulty at the morphemic level, the level that should be obtained by high school. Many also found decoding of multisyllabic words and more complex vowel patterns to be the stumbling block. The ability to fully analyze words by their sound/spellings helps the reader to decode unfamiliar words and to spell words as well. Spelling ability contributes positively to word recognition, and indirectly to comprehension (Stanovich and Cunningham, 1993). Therefore, middle and high schools need to find intervention programs that explicitly teach students decoding and multisyllabic word attack skills and develop spelling ability through identifiable stages, from basic alphabetic spelling to within-word pattern spelling and ultimately to spelling patterns based on meaning.

In addition to explicit instruction in decoding skills, well-designed programs will need to address the neglected skill of fluency development. Fluency includes speed and accuracy and a third dimension—prosody. This third dimension, the musicality of reading, is a hallmark of a comprehending reader, one who recognizes phrasal junctures and understands the words sufficiently to know which words to emphasize, where to pause, and where to move quickly. Fluency improves with practice (Dowhower, 1987), and it depends on a reader's basic decoding skills and syntactic knowledge. Fluent readers demonstrate greater comprehension. This is because excessively slow reading impedes comprehension by using up mental resources needed for making meaning. Laborious reading also diminishes the desire to read (Nathan and Stanovich, 1991; Samuels, 1994). The use of contextual clues to decode actually does not compensate for a lack of automaticity in decoding skill (Shaywitz, 1996). Many struggling secondary readers lack fluency. These students read less and therefore fail to develop vocabulary since wide reading is the greatest contributor to vocabulary growth. Thus comprehension suffers

further. This correlation is well established. A well-designed reading intervention program for older struggling readers will include a great deal of practice to develop automaticity in decoding, and rapid and accurate reading of sentences and easy level text. Well-designed base programs for regular middle school students will also include added fluency practice.

- n ***Language comprehension*** Language comprehension includes linguistic and syntactic knowledge as well as semantics or word meaning knowledge. Text comprehension rests on the ability to recognize words fluently and effortlessly. This implies that readers understand the language system we use in our texts—our phonology (sounds), our morphology (units of meaning within a word), and our syntax (the underlying grammatical structure). While weaker readers need explicit instruction in English phonology as they learn decoding, most secondary students have a rudimentary understanding of the sounds and syntax of our language. However, they may still profit from systematic instruction in morphemic elements of English—roots, prefixes, and suffixes—as well as from careful development of vocabulary. Building a strong vocabulary is absolutely essential since research is quite clear about the strong correlation between comprehension and the size and depth of one’s vocabulary (Beck and McKeown, 1991). Proficient readers read widely, and books are their greatest source of vocabulary growth (Hayes and Ahrens, 1988). Because struggling readers do not read widely, a huge gap in word knowledge distinguishes them from their proficient reading peers (Baker, Simmons, and Kame’enui, 1995).

In addition to linguistic and word knowledge, struggling middle and high school readers will benefit from more explicit understanding of English syntax. Weaker readers tend to have more difficulty as the sentence length and complexity increases, and sentences include adverbial clauses, subordinate construction, and pronoun references. This is especially true for English language learners.

- n ***Text comprehension*** Struggling secondary readers suffer from a lack of background knowledge about reading and about different text structures. This is largely because the source of background knowledge about academic language and books is wide reading,

and struggling readers avoid this. Therefore, in addition to opportunities for self-selection of appropriate texts, struggling readers will benefit from explicit instruction in making connections, in self-monitoring while reading, and in understanding texts. Struggling high school students may comprehend at a surface level but have difficulty making inferences. The ability to make inferences is dependent not only on solid vocabulary, word recognition, and syntactic knowledge, but also on the ability to *read between the lines*. To build inferencing skills, secondary students profit from clear instruction, often through the use of teacher models called “think-alouds.” This includes teaching students how to locate both text-explicit information and text-implicit information (Carnine et al., 1997; Raphael, 1982, 1984, 1986). In addition to difficulty with inferences, struggling readers do not generally know how to monitor their comprehension. Teachers can help these students build self-monitoring capacity by again modeling expert reading through think-alouds and by explicitly teaching comprehension strategies and helping students know when, why, and under what conditions to use various meaning-making strategies.

Finally, because struggling readers lack text experience, the more teachers can do to explicitly “unpack” the underlying structure of different types of texts the better. Students need to be taught how to deal with narrative story structure and narrative story elements. More important to the middle and high school curriculum, students will need explicit instruction in dealing with content-area informational text. Pearson and Fielding (1991) found that when students understood the structural patterns in expository text, they were better able to recall information and the main ideas within the text. This includes directly teaching various expository text structures, signal words often used in the structures, and the use of graphic organizers to assist in text comprehension. Additionally students need instruction in locating information and using the presentation signals provided by headings, different fonts, and charts and graphs (Dickson, Simmons, and Kame’enui, 1998). All of these strategies will need to be incorporated in intensive intervention classes, in regular English classes, and within the teaching repertoire of content area teachers.

School Support Systems and Leadership

Over the past several years, school reforms have been too numerous to count. All have been well intentioned, but few have resulted in improved student achievement. Many of the reforms have focused on processes (site-based decision making and block schedules) with little attention paid to teaching and learning. Others have focused on instruction but failed to address systemic matters that make it difficult to implement the new approach. The best reforms focus on both these factors—processes and instruction. At the heart of any successful implementation is leadership. Leadership comes not just from the building principal or district superintendent, but also from teacher leaders and mentors. Above all else, it requires determination, commitment, and perseverance. Once the school embraces a new curriculum for reading instruction, it must be nurtured by frequent review, regular meetings for collective discussion and troubleshooting, ongoing professional development, implementation monitoring systems, and coaching support for continuous improvement. Assessment systems, planned restructuring of classroom organization, and instructional time and grouping for differentiated instruction are also part of the crucial support package. It falls to the school leadership to ensure that systematic changes are made.

- ***School Leadership*** It is the school leadership who must unite the entire staff in support of a collective vision of reading instruction for struggling readers and reading instruction guaranteed to raise the achievement of all students in general. The administrators, department chairs, and teacher leaders must thoroughly understand the elements of research-based reading instruction and should establish a school culture that values effective research-based proven practices. The school leadership is responsible for marshalling resources, providing time, and staying the course. The school leadership must be *heroic*, able to resist the many forces that may inhibit implementation of an effective school-wide reading program plan. Those forces will include the need to attend to other curriculum areas or to district- and state-mandated reforms. School reform models that fail to address the needs of the most-vulnerable students also bombard middle and high school leaders. Scheduling challenges may prove the most intractable. Still other forces will come from within the staff, as teachers struggle with

implementation problems. The first year of the implementation of a new reading program presents the challenge of changing teachers' beliefs about reading instruction and initiating the new research-based approach. The second year consists of refining the approach while ensuring consistency and adherence to the program design. The third year, however, poses a new challenge, described by one Sacramento educator as "domestication" (Cooper, 1999). As educators become comfortable with a program, they tend to want to alter it, adjust it, and do it their own way—in short, to domesticate it. Unfortunately, teachers often utilize a pick-and-choose approach to program implementation. This tactic will result in less fidelity to the program design and consequently a lower success rate. Just as it is important for an ill person to carefully follow an established medical protocol for maximum results, a reading teacher needs to implement a well-designed reading intervention as intended. It is during the second and third year of an implementation that the school leadership will face its most serious challenges. This is when staying power is essential. During these years the school leadership needs to have the best research to support continued use of the reading approach. This includes student achievement information, or assessment.

- n ***Assessment*** Student achievement information is crucial. The best assessments will be aligned to the reading intervention program selected and will provide clear placement information, track student progress, and monitor teacher pacing and program use. In an effective overall reading approach, assessment is used to inform instruction for both large groups and individuals. Different assessment instruments serve different purposes. For example, statewide achievement tests serve to inform the public about system-wide instructional efficacy. Individual diagnostic tests enable the classroom teacher to target instruction as well as to inform parents of student needs. Regular assessments are necessary to guide decisions about grouping, instructional pace, and individual need for support. Easy-to-use diagnostic and progress-monitoring tests are crucial. Assessment is necessary to monitor progress but also to identify causes of reading weakness.

Schools need to organize their assessment toolkits around three broad categories: screening assessments (assessments that provide information about a student's existing

knowledge and skill base); formative and ongoing assessments (assessments to monitor progress and adjust instruction); and summative assessments (assessments at the end of a quarter, semester, or year, used to evaluate). In all cases, teachers need to understand the expected targets of mastery for individual skills in order to identify students at risk of difficulty and to tailor instruction to meet identified needs.

- n ***Time*** Of all the variables under a school's control, the most important is making good use of time to maximize learning. For significantly below-level secondary students, at least two hours (or two periods blocked) a day of targeted reading intervention is crucial. Additional time beyond the two periods is needed for special one-to-one or small-group intervention. Students identified as poor readers face what Kame'enui (1993) refers to as "the tyranny of time" in trying to catch up to their peers. Simply keeping pace with one's peers is not enough. These students will need increased time and instruction of the highest quality.
- n ***Instructional Grouping for Intervention*** To make instruction effective for the most-naïve readers, students will need to be carefully placed based on identified need. This is in stark contrast to the current de-tracking movement. While de-tracked, heterogeneous classes are the goal, for the significantly below-level student, this is impractical and actually does a disservice to the student. These students are never fully equipped with the skills they need to be independent learners. Typical one-period interventions are not intensive nor of sufficient duration to bring these students up to speed and help them learn to read as quickly as possible. To ensure that their instruction is targeted, swift, and complete, placement tests tied to the selected intervention program will provide the information needed for effective and efficient grouping.
- n ***Coaching*** Since coaching is so important to the effective implementation of any new concept, it falls to the leadership to design and implement a system of peer and expert coaching. Such coaching should be supported by clear expectations and guidelines and should be aligned to the selected materials as well. Coaches will assist and support teachers as they try a strategy, implement new materials, and engage in the assessment of

and planned intervention for students. Coaches need to be trained and mentored as they grow into this role.

- n ***The Home-School Connection*** For implementation to be effective, there must be a deep connection between the school and the students' homes. Since independent, outside reading is so important to enhance reading vocabulary and build background knowledge, parents must thoroughly understand the school expectations for outside reading, the nature of the reading program, and strategies that they can use at home. Parent education and parent engagement are vital. Parents may also fill vital tutoring roles.

The Pasadena Unified School District aggressively tackled its literacy problems on many fronts, beginning with its selection of research-based instructional materials for all students, a basic core curriculum, the necessary support materials, and specialized intervention materials for English Learners and for students who were reading significantly below grade level. In addition, the district provided all teachers with five days of intensive staff development linked to their grade level and teaching responsibilities. Literacy coaches were placed at sites system-wide and were provided with targeted training and on-going support. District office leadership, coaches, and site administrators were trained in observation procedures for each reading program. Coaches and teacher leaders received training in basic instructional principles for developing vocabulary and comprehension across content areas, along with materials that they could use to train other teachers.

The success of the Pasadena program, however, required more than training teachers and providing materials to students. The leadership, direction, and support of district administrators were essential. It was their commitment that led to additional funding for coaching, supplies, and professional development. It also led to mandated schedule changes for struggling readers to allow longer periods of reading instruction. Importantly, the deputy superintendent, director of secondary curriculum and instruction, and the district literacy coordinator all supported the plan. At the site level, the leadership teams of school principals, assistant principals, literacy coaches, and English department chairs were expected to participate actively in implementing the plan.

The well-coordinated effort in Pasadena is paying off. After just one full year of the plan's institution, results are impressive. Unlike the district's previous experiences, in which reading gains by elementary school students typically flattened out or declined in the middle and high school grades, this year English Language Arts test scores for students in grades 7-11 went up in every grade. The number of ninth-grade students scoring in the advanced or proficient categories increased by 12% over 2004, after remaining unchanged for the two previous years. And all four traditional high schools posted English Language Arts gains in every grade tested.

Similarly encouraging results are being seen in the Yakima School District, Washington, which has been working since 2002 to implement a new K-12 reading program. The district's goal at the secondary level is to help students gain at least two grade levels of reading during the course of one school year's instruction. Initial results are promising. In the first year of the middle school program, the reading scores of seventh graders rose an average of 17 percentage points. In 2004-2005, the second year of the program, scores went up another 15 percentage points. These impressive gains are directly attributable to the well-planned introduction of a scientifically based reading curriculum (*High Point*) at every grade level, supported by onsite implementation assistance from CORE. Program components include the placement of a reading coach in every school, working in close collaboration with content-area teachers, and extended class time for reading instruction: 90 minutes a day in middle schools and 110 minutes a day in high schools. Assessment is a vital component of the program. Students whose test scores show them to be reading two or more grade levels behind are assessed regularly throughout the school year. As Yakima's successes demonstrate, a coordinated, multi-tiered approach to improving reading skills can produce positive, and measurable, outcomes.

Conclusion

Designing, implementing, and sustaining an effective reading program is everybody's business. It requires well-designed and ongoing professional development to equip educators with the

knowledge base they need for effective reading instruction; it requires the selection of appropriate tools tightly linked to the research; and, finally, it requires support systems initiated by the local leadership to ensure smooth implementation and enduring effects.

References

Baker, S. K., Simmons, D. C., and Kame'enui, E. J. 1995. *Vocabulary acquisition: Synthesis of the research* (Tech. Rep. No. 13). National Center to Improve the Tools of Educators, University of Oregon, Eugene, OR.

Beck, I. and McKeown, M. 1991. Conditions of vocabulary acquisition. In R. Barr, M. L. Kamil, P. Mosenthal, and P. D. Pearson (eds.), *Handbook of Reading Research, Vol. II*. 789–814. New York: Longman.

California State Board of Education. 1999. *Reading/Language Arts Framework for California Public Schools: Kindergarten Through Grade Twelve*. Sacramento, CA: California Department of Education.

California Department of Education. 1999. *Reading/Language Arts Framework for California Public Schools*. Sacramento, CA.

Carnine, D. W., Silbert, J., and Kame'enui, E. J. 1997. *Direct Instruction Reading*. (3rd ed.) Upper Saddle River, NJ: Prentice-Hall.

Catts, H. W., Fey, M. E., Zhang, X., and Tomblin, J. B. 1999. Language basis of reading and reading disabilities: Evidence from a longitudinal investigation. *Scientific Studies of Reading* 3, 331–361.

Chall, J. S. 1967. *Learning to Read: The Great Debate*. New York: McGraw-Hill.

Cooper, K. 1999. Speech on Sacramento city school's Reading Lions progress before the *Reading Lions Conference*. Monterey, CA. September 23, 1999.

Dickson, S. V., Simmons, D. C., and Kame'enui, E. J. 1998. Text organization: Instructional and curricular basics and implications. In D. C. Simmons and E. J. Kame'enui (eds.), *What Reading Research Tells Us About Children with Diverse Learning Needs: Bases and Basics*. Mahwah, NJ: Erlbaum.

Dowhower, S. L. 1987. Effects of repeated reading on second-grade transitional readers' fluency and comprehension. *Reading Research Quarterly* 22 (4), 389–406.

Foorman, B. R., Francis, D. J., Fletcher, J. M., Schatschneider, C., and Mehta, P. 1998. The role of instruction in learning to read: Preventing reading failure in at-risk children. *Journal of Educational Psychology* 90, 37–55.

Guthrie, J. T. and Wigfield, A. 2000. Engagement and motivation in reading. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, and R. Barr (eds.), *Handbook of Reading Research, Vol. III*. 403–422. Mahwah, NJ: Erlbaum.

Hayes, D. P. and Ahrens, M. G. 1988. Vocabulary simplification for children: A special case of “motherese”? *Journal of Child Language* 15, 395–410.

Joyce, B., Calhoun, E., and Hopkins, D. 1999. *The New Structure of School Improvement: Inquiring Schools and Achieving Students*. Philadelphia, PA: Open University Press.

Joyce, B. R. and Showers, B. 1982. The coaching of teaching. *Educational Leadership* 40 (1), 4–16.

Kame'enui, E. J. 1993. Diverse learners and the tyranny of time: Don't fix blame; fix the leaky roof. *The Reading Teacher* 46 (5), 379–383.

Kulik, C. L., Kulik, J. A., and Bangert-Downs, R. L. 1990. Effectiveness of mastery-learning programs: A meta-analysis. *Review of Educational Research* 60 (2), 265–299.

McPeak, L. and Smith, F. *A Systematic Approach to the Implementation of Research-Proven Interventions for Struggling Readers Gr. 4–12*. Presentation and paper at Sonoma County Office of Education. Sonoma, CA. May 2001.

Mikulecky, L. J. 1990. Stopping summer learning loss among at-risk youth. *Journal of Reading* 33 (7), 516–521.

Nathan, R. G. and Stanovich, K. E. 1991. The causes and consequences of differences in reading fluency. *Theory into Practice* 30 (3), 176–184.

Pearson, P. D. and Fielding, L. 1991. Comprehension instruction. In R. Barr, M. L. Kamil, P. Mosenthal, and P. D. Pearson (eds.), *Handbook of Reading Research, Vol. II*. White Plains, NY: Longman.

Peterson, C. L., Caverly, D., Nicholson, S., O’Neal, S., and Cusenbary, S. 2000. *Building Reading Proficiency at the Secondary Level: A Guide to Resources*. Austin, TX: Southwest Educational Development Laboratory, 6.

Raphael, T. E. 1982. Question-answering strategies for children. *The Reading Teacher* 36, 186–190.

Raphael, T. E. 1984. Teaching learners about sources of information for answering comprehension questions. *Journal of Reading* 28, 303–311.

Raphael, T. E. 1986. Teaching question/answer relationships, revisited. *The Reading Teacher* 39, 516–22.

Samuels, S. J. 1994. Toward a theory of automatic information processing in reading, revisited. In R. B. Ruddell, M. R. Ruddell, and H. Singer (eds.), *Theoretical Models and Processes of Reading* (4th ed.) 816–837. Newark: International Reading Association.

Shankweiler, D., Lundquist, E., Dreyer, L. G., and Dickinson, C. C. 1996. Reading and spelling difficulties in high school students: Causes and consequences. *Reading and Writing: An Interdisciplinary Journal* 8, 267–294.

Shankweiler, D., Lundquist, E., Katz, L., Stuebing, K. K., Fletcher, J. M., Brady, S., Fowler, A., Dreyer, L. G., Marchione, K. E., Shaywitz, S. E., and Shaywitz, B. A. 1999. Comprehension and decoding: Patterns of association in children with reading difficulties. *Scientific Studies of Reading* 31, 69–94.

Shaywitz, B. A., Fletcher, J. M., Holahan, J. M., and Shaywitz, S. E. 1992. Discrepancy compared to low achievement definitions of reading disability: Result from the Connecticut longitudinal study. *Journal of Learning Disabilities* 25 (10), 639–648.

Shaywitz, S. E. 1996. Dyslexia. *Scientific American* (11/01).

Shaywitz, S. E., Fletcher, J. M., Holahan, J. M., Shneider, A. E., Marchione, K. E., Stuebing, K. K., Francis, D. J., Pugh, K. R., and Shaywitz, B. A. 1999. Persistence of dyslexia: The Connecticut longitudinal study at adolescence. *Pediatrics* 104 (6), 1351–1359.

Stanovich, K. E. and Cunningham, A. E. 1993. Where does knowledge come from? Specific associations between print exposure and information acquisition. *Journal of Educational Psychology* 85 (2), 211–229.

Wigfield, A. and Eccles, J. S. 1994. Children's competence beliefs, achievement values, and general self-esteem: Change across elementary and middle school. *Journal of Early Adolescence* 14 (2), 107–138.s