

 **SCHOLASTIC**
Professional
Paper

A Heritage of Research



ENTERPRISE EDITION



READ 180[®]

A Heritage of Research



Contents

Introduction	3
Older Struggling Readers: A Nationwide Epidemic	3
Phase 1: The Cognition and Technology Group at Vanderbilt University	4
The Development of Software-Based Solutions	4
1. The Development of Phonemic Awareness and Decoding Solutions	5
2. The Development of Comprehension Solutions	8
3. The Development of Solutions to Raise Student Motivation and Connection to School	8
4. The Development of Solutions to Increase Success With Content-Area Text and Vocabulary	9
Phase 2: Orange County Collaboration	9
The Development of the Orange County Literacy Project	9
The Outcome: Significant Gains Within One School Year	10
Phase 3: Ongoing Research, Testing, and Development of <i>READ 180</i>	11
Scholastic Partnership With Vanderbilt University and Orange County	11
Research on Common Spelling Errors	11
Development of the Instructional Model	12
Support for English-Language Learners	12
Implementation of the Lexile Framework	12
Universal Access	13
Reports for Diagnostic Assessment	13
Content That Respects and Motivates Readers	13
Development of Audiobooks With a Reading Coach for Modeled Reading	14
Development of Paperbacks for Independent Reading	14
<i>Scholastic Reading Counts!</i>	14
Instructional Technology (Topic Software)	14
Effective Teaching Tools	15
Phase 4: Transition to <i>READ 180</i> Enterprise Edition	15
Teacher-Directed Instruction	15
Differentiated Instruction	16
Data Aggregation Through Scholastic Achievement Manager (SAM)	16
Support for English-Language Learners	17
Looking Forward	17
Efficacy Studies	17
Future Research	17
References	18

Introduction

READ 180, a comprehensive reading intervention program geared for students reading below the proficient level in Grades 4–12, is the result of many years of educational research and development. The development of *READ 180* was informed primarily by the work of the Cognition and Technology Group at Vanderbilt University, the Orange County Literacy Project in Florida, and the development staff at Scholastic. Scholastic initially developed and published the *READ 180* program in the late 1990s; more recently, Scholastic developed and launched the Enterprise Edition of *READ 180* in early 2006.

Older Struggling Readers: A Nationwide Epidemic

The statistics on reading proficiency in older readers are alarming. Research from the 2005 National Assessment of Educational Progress (Perie, Grigg and Donahue, 2005) has shown that:

- Thirty-six percent of fourth graders are reading at below basic levels.
- These reading problems affected students in almost every social, cultural, and ethnic group. According to the results, 24 percent of whites, 58 percent of African Americans, 54 percent of Hispanics, 27 percent of Asian Americans, and 52 percent of Native Americans were reading at below basic levels in the fourth grade.

Further, according to *Reading Next*, a report commissioned by the Carnegie Corporation of New York, “approximately eight million young people between fourth and twelfth grade struggle to read at grade level. Some 70 percent of older readers require some form of remediation” (Biancarosa & Snow, 2004, p. 3). These statistics tell of a pressing nationwide issue. The impact of not being able to read well by the third grade is devastating. Many of these students have fallen into a cycle of failure and shame. For these students, the inability to read and write proficiently results in problem behaviors (Kos, 1991; McGee, Share, Moffitt, Williams, & Silva, 1988), and school dropout (Biancarosa & Snow, 2004).

One researcher has described the situation as the Matthew Effect, or “the rich get richer and the poor get poorer,” based on a narrative in the book of Matthew in the Christian Bible (Stanovich, 1986). Just as the capable reader gains vocabulary and experiences reading as a pleasurable activity, the struggling reader reads less, thereby limiting vocabulary growth and inhibiting reading development (Walberg et al., 1984; Walberg and Tsai, 1983). Such readers' lack of practice, deficient decoding skills, and negative experiences make reading a less-than-rewarding experience (Stanovich, 1986). *READ 180* helps these students achieve sufficient gains in reading ability so they can attain the literacy skills needed to succeed in school and in life.

Phase 1: The Cognition and Technology Group at Vanderbilt University

In 1985, Dr. Ted Hasselbring and other members of the Cognition and Technology Group at Vanderbilt University began research on how technology could be used as a tool to effectively support struggling students. They observed the ways that technology had improved the quality of education for people with physical and mental impairments. Consequently, they became interested in how educational technology could help students with learning disabilities or students with a lack of mastery of basic skills that prevent them from moving on to higher-level skills.

As they analyzed the research on older struggling readers, the group sought to identify the key problems these learners encountered. The group's synthesis of existing research led them to four major conclusions about the deficits exhibited by older struggling readers. As shown in Figure 1, these deficits are closely related to the skills that the National Reading Panel has identified as essential to reading success (National Reading Panel, 2001).

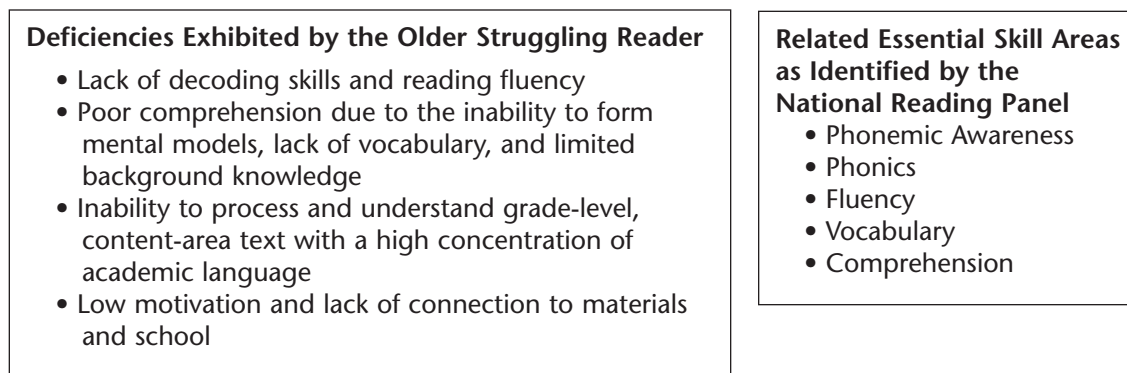


Figure 1: Research Conclusions on the Deficits of Older Struggling Readers

The Development of Software-Based Solutions

Recognizing that older struggling students have a wide range of both abilities and deficits, Dr. Hasselbring and his colleagues turned to technology as a means of providing assessment-driven individualized instruction. Partially funded by a grant from the U.S. Department of Education's Office of Special Education Programs, the team created a software program called the Peabody Learning Lab. This software program consisted of a carefully planned sequence of student activities that provided individualized skills instruction and practice. Each element was designed to address one or more of the problems Dr. Hasselbring had identified.

The Peabody Learning Lab became the prototype for the *READ 180* Topic Software, the technology component of this nationally used reading intervention program. The following discussion of the software's functionality applies both to the original prototype as well as to the *READ 180* Topic Software. [See page 10 for a discussion of the enhancements that were made by Scholastic in conjunction with Dr. Hasselbring and Laura Goin of Vanderbilt University in preparation for the national release of *READ 180*.]

1. The Development of Phonemic Awareness and Decoding Solutions

Controlled Text

Each software segment begins with a video and a passage that summarizes the video. The passage is available at several reading levels, and students are assigned to an appropriate level using diagnostic assessment. This way, students practice reading at their own level, and thus avoid the frustration and discouragement that comes with reading texts that are too difficult for them. This opportunity to read and reread with a high degree of success helps build fluency (National Reading Panel, 2001). The passages include words that provide multiple exemplars of a targeted sound-spelling pattern, high-frequency words, and grade-appropriate, content-area vocabulary words.



Figure 2: Leveled Passage With Targeted Elements

As students progress through the software, they are presented with activities that repeat words from the controlled passages. These activities promote fluency and automaticity, allowing for better comprehension through the following means:

- *Rapid word recognition:* Students must identify words at increasing speeds. The software's management system tracks the words that the student identifies incorrectly; correctly though slowly; and correctly with automaticity.
- *Orthographic knowledge and phonological processing skills:* When students have difficulty identifying a word, the software provides support through visual and audio modeling of how to break down the words into meaningful phonological parts. This modeling of oral blending and segmentation is an important part of developing phonemic awareness, critical in learning to read and spell with success (Adams, 1990). In addition, the software uses spelling instruction to reinforce orthographic knowledge and enhance reading proficiency. This is accomplished by training in segmentation and blending using instruction in letter-sound relationships as well as tutor-supported modeling in which an on-screen tutor models how to decode an unfamiliar word. This modeling uses audio and visual support to highlight letter-sound correspondences, phonic elements, and significant word parts such as onset/rime, prefix/suffix, syllables, and word structure.

Finally, the software uses audio and visual support to provide immediate corrective feedback on student errors, and generates strategies for remediation. Through this support, students continually review and practice targeted words to achieve fluency and mastery.

Begin With Assessment

Unlike the younger, emergent reader whose lack of phonologic awareness and phonics skills are often recognized, it is much more difficult to ascertain where the gaps in these skills exist in the older reader. For struggling readers, researchers have concluded that intervention must address students' specific deficits. It is crucial to continually assess, diagnose, and tailor instruction to student needs (Blevins, 2001).

The Vanderbilt group equipped the software with features that provide initial and ongoing assessment to identify each student's individual level of proficiency with specific phonic elements. The software adjusts to each student, providing individualized activities that promote systematic practice, review, and instruction in order to develop mastery.

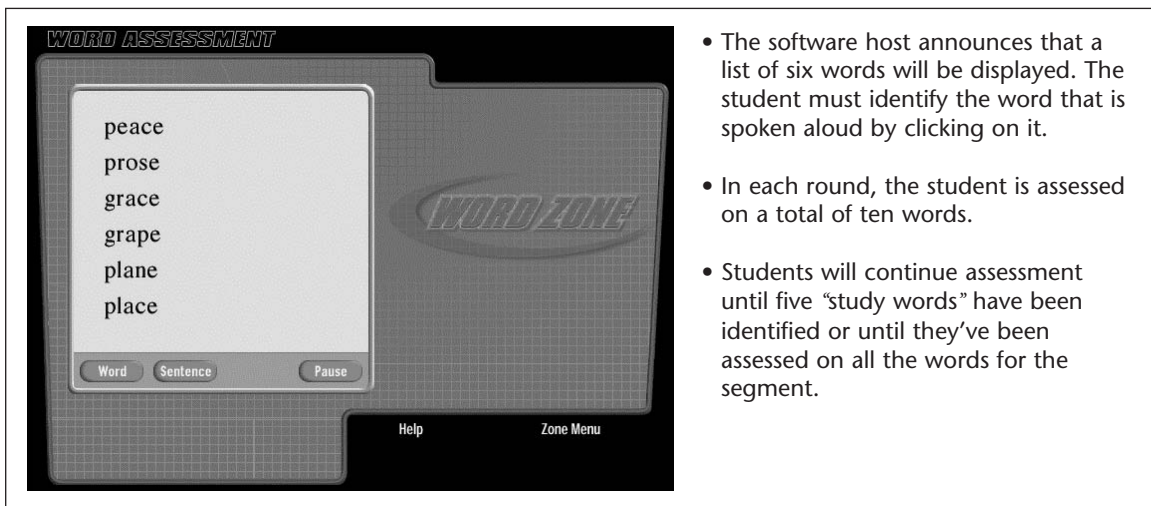


Figure 3: Word Zone Assessment

The Word Zone assessment determines which words from a leveled reading passage students are able to read with automaticity and which words they need to study further. Students must differentiate among multiple distractors to identify the word they hear. To show mastery and be considered fluent with a word, students must correctly identify the word two of three times.

Similar assessments inform instruction and practice in the software's Spelling Zone. Spelling assessment words are drawn from the student's leveled reading passage, assuring that the words are at the student's developmental level. Instruction is focused on the words the student has not yet mastered. This presents a high time/benefit ratio, focusing the student's time on the words and patterns for which the student needs most practice. This efficient use of time is particularly urgent for students who are below grade level (Invernizzi, Abouzeid, and Gill, 1994; Moats, 1995). The software's corrective feedback also uses a validated imitation and modeling procedure based on early groundbreaking research by Ted Hasselbring. This procedure helps students identify their spelling errors by comparing their own spelling to the correct spelling (Gerber, 1996; Moats, 1995).

Automaticity and Fluency

Cognitive psychologists have concluded that when a reader's mental energy is devoted to decoding, little capacity is left for comprehending. Only when decoding skills are sufficiently developed can a student free up the cognitive powers necessary for comprehension (Freedman and Calfee, 1984; LaBerge and Samuels, 1974; cited in Blevins, 1998). With their software, Dr. Hasselbring and his colleagues aimed to build low-achieving students' word-recognition skills to help improve their comprehension.

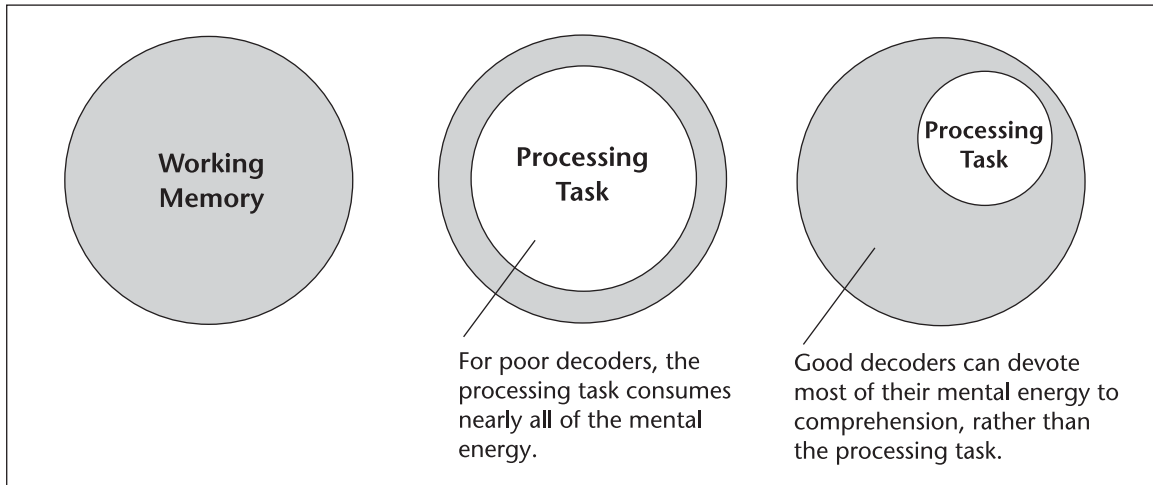


Figure 4: Relationship of Word Recognition to Comprehension

Automaticity involves automatic word recognition; in other words, the reader recognizes words with little effort. To develop automaticity, the software directs students to listen to a word and to practice distinguishing it from others in a list. The software requires that students practice identifying words at increasing speeds as the student shows mastery. When combined with modeling that reinforces letter-sound correspondence and identification of word parts, this rapid word-recognition exercise has been shown to increase reader automaticity.

To read with fluency, a reader needs more than automatic word-recognition skills. The reader must also have the proper phrasing and expression that is necessary for text comprehension (National Reading Panel, 2001). The first time students encounter their leveled reading passage on the software, they visually track the text while listening to an audio model of fluent reading. Follow-up activities guide students to repeated readings of connected text with varying levels of audio support and speed. This continuous scaffolded practice adapts to each student's level of mastery. Periodically, students are guided to make a recording of their own reading for self-assessment. A final recording at the end of the segment is saved for teacher assessment.

Each time students return to the software, they are directed to repeated readings of their passage. This guided, repeated oral reading has been shown to have a significant positive impact on word recognition, fluency, and comprehension (National Reading Panel, 2001).

2. The Development of Comprehension Solutions

Studies have shown that in order to make sense of texts, students must have some degree of prior knowledge. Prereading strategies, such as building background, are important in helping students who know little or nothing about a topic (Irvin, 1998).

Readers need to build mental models to construct meaning from text. If they cannot visualize ideas, they are not able to grasp concepts and understand ideas (The Cognition and Technology Group at Vanderbilt, 1990). For example, in the passage presented in Figure 5, a student who was not familiar with the vocabulary *Labrador* and *feline* would not be able to visualize this scene.

The big Labrador jumped through the screen door to get at the feline that was sleeping in the sun.

Figure 5: The Importance of Background Knowledge

Research has shown that subjects prefer visual formats over text formats in building conceptual models because video is “dynamic, visual, and spatial,” and promotes the formation of vivid mental models of a situation (The Cognition and Technology Group at Vanderbilt, 1990). This is especially beneficial for low-achieving students and students with little knowledge of a topic.

This research was integrated into the Peabody Learning Lab software through the use of video and CD-ROM technology. Before reading each controlled-text passage on the software, students view a dynamic video that develops background knowledge and vocabulary. This process helps students build a mental model so that when students encounter the text summary of the video, they are already familiar with the vocabulary and concepts. Dr. Hasselbring and his colleagues found that subjects who viewed video before approaching a related text were more adept at discussing and evaluating the text than subjects who were given a text without a video anchor (The Cognition and Technology Group at Vanderbilt, 1990).

3. The Development of Solutions to Raise Student Motivation and Connection to School

“By the end of the first grade, we begin to notice substantial decreases in the children’s self-esteem, self-concept, and motivation to learn to read if they have not been able to master reading skills and keep up with their age-mates” (Lyon, 1998). The perceived utility value of reading also affects motivation. As in all endeavors, the usefulness of the reading activity influences the investment the reader makes (Guthrie and Wigfield, 1997). When students recognize that one of the benefits of reading includes helping them understand and simply function in the world they live in, this greatly impacts their motivation to read.

The Vanderbilt software, and the *READ 180* program in general, directly addresses the problems of students who are trapped in a cycle of failure by providing them with many opportunities to experience success from the start. In the Topic Software, instruction and practice are customized according to students’ abilities to prevent frustration and build success. The motivating content of the Topic Software Videos helps students adopt positive attitudes toward reading. Validation studies show that *READ 180* helps struggling readers close the performance gap that separates them from their grade-level peers (Hewes, Mielke, & Johnson, 2006; Interactive, Inc., 2002; Papalewis, 2002; White, Williams, & Haslam, 2005; White & Haslam, 2005). In developing the software, motivating students was a key goal.

As the program developed, many of the instructional elements exhibited motivational effects. Survey results from a study of *READ 180* in the Department of Defense schools and anecdotal reports from teachers, parents, and students all indicate that students are enthusiastic about the program and that their reading confidence improves while using the program (Goin, Hasselbring, & McAfee, 2004). Research on older struggling students suggests that this positive shift in student attitudes can contribute to long-term academic success.

4. The Development of Solutions to Increase Success With Content-Area Text and Vocabulary

Students learn most words through everyday experiences with oral and written language. However, in order to succeed, students also need to learn the academic language that is found in textbooks and the classroom. Academic language carries much of the content and meaning in nonfiction and content-area text. Nonfiction represents most of what students encounter in school, on standardized tests, and in the working world. How can students build vocabulary and academic language? Researchers have concluded that repetition and exposure to new words is crucial to vocabulary development (National Reading Panel, 2001). Furthermore, vocabulary instruction that offers both definitional and contextual information has been found to have the greatest impact on students' reading comprehension (Honig, Diamond, and Gutlohn, 2000).

By presenting images and background information, the Topic Software Videos present students with the context necessary to help them understand new vocabulary words and academic language. The related skills instruction and practice activities build vocabulary and academic language through content-area, nonfiction passages. For added support, students can click on highlighted words to receive definitions, context sentences, and pronunciation support.

Phase 2: Orange County Collaboration

The Development of the Orange County Literacy Project

What turned out to be the second phase in the evolution of *READ 180* came in 1993 when administrators in Orange County, Florida, became alarmed by a rise in truancy and defiant, disruptive student behavior. When the Director of Secondary Education, Dr. Rose Taylor, looked into the student data, however, she found that the students who were exhibiting the behavior problems also had the lowest reading scores (Taylor, Hasselbring, & Williams, 2001). It became clear that what Orange County had thought was a discipline problem was in fact a reading problem.

The county set out to create an intervention program and sought the support of Dr. Hasselbring of Vanderbilt University and Dr. Janet Allen, a reading education specialist from the University of Central Florida. Their collaboration led to the development of the Orange County Literacy Project in 1994. The Literacy Project was based on two complementary approaches to improving essential skills.

1. The Literacy Workshop

The Literacy Workshop used a teaching method designed to improve students' reading, writing, speaking, and listening skills. Students participated in a series of additional activities, including self-selected reading, books on tape, and the reading of different forms of text such as newspapers and rule books for games. The district committed 90 minutes of uninterrupted literacy work each day for participating sixth to ninth graders in classes limited to 20 students or less. In addition, all teachers participated in a week of professional development for the Literacy Project.

2. The Peabody Learning Lab

By this time, the Peabody Learning Lab software had been tested extensively with high school students and adults. The Orange County Literacy project leaders, impressed with how the innovative software program used sophisticated computer technology to track individual student progress and adjust instruction, incorporated it into their program. Students taking part in the Literacy Project spent 20–30 minutes per day, four days each week, on the computer.

Many of the key elements from the Orange County project were subsequently incorporated into the *READ 180* instructional model. These elements included: a combination of direct instruction and guided practice, in which teachers engaged in direct instruction with individuals, small groups, and the whole class; modeled and independent reading of high-interest materials, representing a variety of genres, that struggling readers can complete successfully; good reading models—including teacher read-alouds, books on tape, and shared reading; and a supportive environment in which students are involved and develop a sense of belonging to a community of learners.

The Orange County Literacy Project was first piloted in three middle school classrooms during the 1994–1995 school year. The student data were impressive, leading the county to expand the program to 13 classes in 1995–1996, and district-wide the following year. Eventually, this *READ 180* prototype was used with thousands of students in Orange County between 1993 and 1999.

The Outcome: Significant Gains Within One School Year

Quantifiable improvements in reading were observed as soon as the pilot year (Hasselbring & Goin, 2004). The Stanford Diagnostic Reading Test (SDRT) was administered to all 63 students in the Literacy Project (Grades 6 to 8) as well as 62 comparison students when the program was piloted in Fall 1994 and again in Spring 1995. The students in the Literacy Project were found to have made significantly larger gains than the comparison group on four out of six subtests of the SDRT: auditory vocabulary, literal comprehension, inferential comprehension, and total reading comprehension.

TABLE 1
Stanford Diagnostic Reading Test Pretest and Posttest NCE Scores

Subtest Group	Pretest		Posttest		Gain
	M	(SD)	M	(SD)	
Auditory Vocabulary					
Literacy Project	21.5	(14.0)	29.4	(16.0)	7.9
Comparison Group	32.3	(17.9)	29	(20.0)	-3.3
Literal Comprehension					
Literacy Project	11.2	(10.2)	18.9	(13.8)	7.7
Comparison Group	19.5	(17.2)	18.6	(17.7)	-0.9
Inferential Comprehension					
Literacy Project	15.1	(11.4)	20	(13.2)	4.9
Comparison Group	25.2	(19.4)	23.3	(24.3)	-1.9
Total Reading Comprehension					
Literacy Project	11	(9.5)	20.3	(12.4)	9.3
Comparison Group	21.3	(17.8)	20.9	(21.1)	-0.4
Phonetic Analysis					
Literacy Project	18.2	(12.4)	24.7	(13.0)	4.5
Comparison Group	25.1	(15.1)	29.6	(18.5)	4.5
Structural Analysis					
Literacy Project	14.3	(14.5)	24.6	(15.7)	10.3
Comparison Group	20	(19.9)	25.3	(22.4)	5.3

In addition, a three-year implementation study of comprehensive balanced literacy in 12 middle schools in Orange County found that students improved significantly in reading comprehension, school-related self-esteem, and classroom behavior (Taylor, Hasselbring & Williams, 2001). Students grew from 2.6 to 3.6 grade level equivalents on the Stanford 9 Achievement Test in reading comprehension, and significant improvement was found in self-esteem as measured by the Culture Free Self-Esteem Inventory. Teachers and administrators anecdotally reported that classroom behavior and attendance improved as well.

Phase 3: Ongoing Research, Testing, and Development of *READ 180*

Scholastic Partnership With Vanderbilt University and Orange County

In 1997, Scholastic entered into collaboration with Orange County Schools and Vanderbilt University to implement the best practices of their research in a published program. Through repeated visits to Orange County classrooms, Scholastic staff observed and interacted with students and teachers.

Through these visits, Scholastic clarified its role and goals for further development of the program. Scholastic staff sought to combine the research-based, student-proven software and instructional model with their own expertise in the development of materials that are based on scientific research, easily managed by teachers, and motivating for students. Specifically, Scholastic enhanced the Orange County project by:

- Organizing all content within the Topic Software, Audiobooks, and leveled Paperback libraries, and aligning these components with curriculum themes in science and math, history and geography, and peoples and cultures, to build content literacy and to develop academic language.
- Adding a comprehensive scope and sequence of phonics/decoding skills to the program content.
- Infusing controlled text and leveled practice through content-area reading.
- Emphasizing direct instruction in reading comprehension, word analysis, phonics, spelling, and writing.

Some of the key features Scholastic brought to its 1999 launch of *READ 180* are described on the following pages.

Research on Common Spelling Errors

Scholastic worked with Dr. Ted Hasselbring and Laura Goin of Vanderbilt University to enhance the software's feedback on students' spelling errors. Using Louisa Moats's research on the most common spelling errors of students (Moats, 1998), they adjusted the Topic Software to be able to recognize specific types of errors and provide immediate corrective feedback based on those specific errors. For example, one common error is when students often omit spellings for syllables that include unaccented vowels. Thus, if the student types *celbration* instead of *celebration*, the software recognizes the common error, highlights the omitted syllable in the word, and gives specific feedback: "Pay special attention to this part of the word."

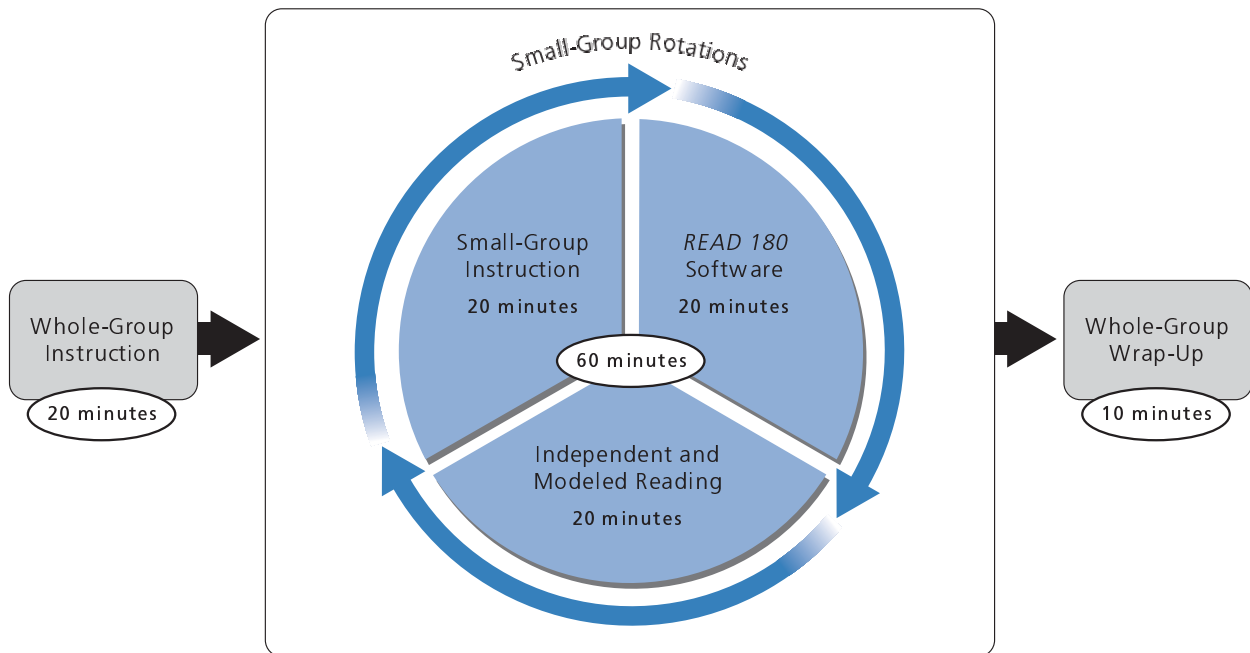


Figure 6: *READ 180* Instructional Model

Development of the Instructional Model

Based on analysis of the most effective instructional plans used in the Orange County studies, Scholastic developed an instructional model for structuring the *READ 180* class and use of the program components. The model assures daily teacher-led instruction in Whole-Group Instruction and intervention in Small-Group Instruction, experience with Modeled and Independent Reading, and use of the research-proven Software. The model also recommends a 90-minute block of instruction to allow time for use of all parts of the program each day. Research studies on *READ 180* classrooms have shown that classes that follow the instructional model as described have significantly greater gains than those who do not.

Support for English-Language Learners

Good products for English-language learners provide help for students in their native language, immediate corrective feedback, and rewards (Bishop, 2001). Scholastic added support for English-language learners through both “clickable” translations of passage text and summaries of the content-area videos and reading passages. Other support includes patient and immediate feedback that is private and respectful of the student. Students are continually encouraged by a motivating on-screen host and by reports that graphically represent their progress and success. In addition, the program provides many opportunities for oral reading practice, including audio recordings of oral reading for self-assessment. Audiobook narration provides a model of fluent reading, pronunciation, and phrasing of text as the student follows along in the text. Finally, *READ 180* videos and books reflect the interests and backgrounds of diverse learners.

Implementation of the Lexile Framework®

The Lexile Framework for Reading is an educational tool that measures both a reader’s ability to comprehend and a text’s level of difficulty using the Lexile® scale. This allows educators to predict the level of comprehension a reader will experience with a particular text. The Lexile system was developed by

MetaMetrics, Inc., an independent research and development firm founded in 1984 by the internationally recognized educational theorist, Dr. A. Jackson Stenner. The National Institute of Child Health and Human Development (NICHD) funded MetaMetrics' work with a grant intended to support research on reading and psychometric theory. Today, this instructional tool is recognized as the most accurate way to match readers with text.

Scholastic began its collaboration with MetaMetrics in 1998. *READ 180* uses the Lexile Framework to match students to text at an appropriate level. The Scholastic Reading Inventory™ (SRI) test determines each student's reading ability, using Lexile scores as a measure. In addition, the Paperback libraries and Topic Software text passages are assigned Lexile scores based on their level of difficulty. Students can be easily and consistently matched to high-interest, age-appropriate text that engages their interests, promotes fluency, and prevents frustration. Many well-known reading achievement tests such as the Terra Nova (CAT, CTBS), Iowa Test of Basic Skills (ITBS), Measures of Academic Progress (MAP), and Stanford Achievement Test (SAT) have been linked to the Lexile framework (Metametrics, Inc., 2004). Such links make it possible for the users of these tests to request equivalent Lexile measures for any specific score. The teacher, librarian, or parent can then look up the reader's Lexile measure on the Web site and build a customized, targeted reading list for that reader.

Universal Access

Scholastic has long been at the forefront of universal design in the field of educational technology. Universal design is a movement that seeks to create structures and products that are designed to accommodate all potential users, including those with disabilities. Together with Dr. David Rose of the Center for Applied Special Technology (CAST), Scholastic codeveloped the first universally designed multimedia language arts curriculum, *WiggleWorks*®.

READ 180 Software offers universal access features, making it accessible to students of varying needs. These include options to activate close-captioning of video text, to alter the color scheme to accommodate visual difficulties, to turn on English-language learner support features, and to adjust the speed of certain activities. In addition to these options, the Topic Software continually adjusts instruction based on the assessed needs of each student.

Reports for Diagnostic Assessment

The research collaboration with Scholastic also led to the development of a variety of reports that provide detailed information about students' progress in word study, comprehension, vocabulary, and spelling. Students make greater gains if instruction and assessment are integrally related (Pelegriano, Chudowsky, & Glaser, 2001). The reports help teachers to tailor instruction for individual students, group students for Small-Group Direct Instruction, assess strengths and weaknesses, evaluate reading progress, and motivate students. They can also aid with administrative and grading duties and be used to communicate progress to students' parents and guardians.

Content That Respects and Motivates Readers

READ 180 materials show respect for the older struggling reader by presenting engaging, age-appropriate materials at levels that promote success. Such experiences provide a necessary supplement, studies have shown, to the skills instruction required by struggling learners (Braunger and Lewis, 1998). Students using *READ 180* have shown significant increases in motivation resulting from their experiences of success and enjoyment of reading. In addition, *READ 180* texts represent a variety of genres and topics that are of high interest to students. Through these selections, students learn about their world, topics of special interest, and perhaps most importantly, themselves.

Development of Audiobooks With a Reading Coach for Modeled Reading

Recorded books are a well-known tool for modeling fluent reading. *READ 180* Audiobooks for Modeled Reading give students access to authentic literature that would otherwise be above their independent reading level. The Narrator models fluent reading, phrasing, attention to punctuation, and proper pronunciation. In addition, Scholastic added the innovation of a Reading Coach, who models “think alouds,” rereading, context clues, and other comprehension and self-monitoring strategies. This internal questioning, which is automatic for good readers, must be modeled repeatedly for struggling readers to help them internalize the strategies and habits of proficient readers (Moats, 2001). Audiobooks afford struggling readers the opportunity to appreciate quality literature—much of it related to content-area subjects such as history and world cultures—and to engage in meaningful discussion of grade-level text.

Development of Paperbacks for Independent Reading

Matching readers to appropriately leveled text is an important element in fostering successful reading experiences (Gambrell, Palmer, and Codling, 1993), and *READ 180* Lexiled Paperbacks allow students to find books that interest them within their reading range. The Paperbacks for Independent Reading in *READ 180* were selected based on the understanding that struggling readers need high-interest and age-appropriate books, with a special focus on content-area nonfiction and relevant topics such as careers, health, and life skills. Scholastic’s long-established collection of well-known books and authors allows *READ 180* to offer a wide range of genres and levels. Many of the Levels 1 and 2 books are sufficiently short so that students can finish them within several days. For many *READ 180* students, who may never have finished a book on their own, this experience of success raises confidence and enjoyment of reading.

Scholastic Reading Counts!TM

Scholastic also incorporated *Reading Counts!* electronic book quizzes for all *READ 180* books. These quizzes are assessed automatically and scored by the same management system that produces Scholastic Reading Inventory and *READ 180* reports. Such assessments serve to hold students accountable for their independent reading, but also motivate students to read more through interactive technology that features a reward system.

Instructional Technology (Topic Software)

Instruction in *READ 180* Topic Software is based on adaptive technology to provide instruction that is individualized based on individual responses and adjusts instruction to meet each student’s needs in the areas of decoding, word recognition, fluency, comprehension, vocabulary, and spelling. Topic Software Videos help students develop the background knowledge they need to form accurate mental models before reading leveled passages. Instructional activities in the four Learning Zones—Reading, Word, Spelling, and Success Zones—focus on target words to develop abilities in decoding, fluency, and comprehension.

Scaffolded instruction begins in the Reading Zone: viewing videos and reading leveled passages. In the Word Zone, students receive systematic instruction in decoding and word recognition as they master words from the reading passage and build fluency. In the Spelling Zone, students complete an initial assessment and receive a customized spelling-word list that they practice in several types of activities. In these activities, they receive immediate corrective feedback based on their specific errors. Finally, students reach the Success Zone after they successfully achieve all requirements and demonstrate mastery of all words in a passage. Students demonstrate success through a final oral recording of the passage, then move to a new segment.

Effective Teaching Tools

Scholastic, with its long history of developing teaching materials that are effective and easy to use, created teaching components to support teachers in building students' skills. The original version of *READ 180* includes a library of Strategies books for direct instruction of skills, as well as a comprehensive teaching guide that provides instructions for program implementation and background and discussion questions for the Topic Software and books.

Phase 4: Transition to *READ 180* Enterprise Edition

After more than 6 years in classrooms, Scholastic published *READ 180* Enterprise Edition in early 2006. This edition is greatly informed by the further research of Dr. Ted Hasselbring and introduces a new partnership with Dr. Kate Kinsella and Dr. Kevin Feldman. Though the research-based student software application and instructional model were unchanged, *READ 180* Enterprise Edition includes significant program and resource enhancements that address several areas, including:

- Teacher-Directed Instruction for vocabulary and word study, comprehension, writing, and grammar.
- Data Aggregation for differentiating instruction and progress monitoring.
- Expanded support for English-language learners.

Teacher-Directed Instruction

The teaching system in *READ 180* Enterprise Edition structures teacher-student engagement during the Whole-Group and Small-Group phases of the 90-minute instructional period while providing quality passages that build content-related vocabulary and concepts. Since students struggle more with nonfiction than fiction, and assessments for older struggling students are majority nonfiction, the *rBook* is 80 percent nonfiction. This nonfiction focus supports transference of comprehension development to student content-area work throughout the school day.

Based on Dr. Kinsella's research on Narrow Reading, the *READ 180 rBook* includes 9 specially designed Workshops or instructional units, with progressively more difficult readings on a related topic. Narrow Reading can help students:

- Develop background knowledge for future reading.
- Gain multiple exposures to vocabulary and concepts that occur regularly across content areas.
- Learn more about the usage of new vocabulary.
- Gain access to high-utility academic vocabulary.
- Develop fluency by practicing reading more quickly and frequently.
- Develop conceptual and lexical tools for writing.

Based on the premise of the *READ 180* Software, *rBook* Workshops begin with Anchor Videos that provide students with background information and vocabulary creating a mental model of the Workshop topic. Anchor Videos are used at the beginning of Whole-Group Instruction and can be revisited during Small-Group Instruction.

The *rBook* Teacher's Edition guides the teacher in presenting systematic and explicit instruction in essential comprehension skills and strategies during each Workshop. Comprehension instruction in the *rBook* follows a gradual-release model that moves students from teacher-led instruction and modeling, to guided

and scaffolded practice, and then independent practice. The use of graphic organizers, text marking, note-taking, and frequent written and oral response helps engage students and scaffolds their application of strategies to improve comprehension. In addition, *rBook* Teacher's Edition lessons include Coaching Notes that guide teachers to consistently model and explain metacognitive strategies, demonstrating for students the habits and strategies good readers use to monitor comprehension.

Students also participate in a variety of instructional routines that are built on Dr. Kevin Feldman's research in the area of structured engagement. The use of structured engagement routines has been shown to increase the attention and on-task behavior of struggling readers and promotes active and accountable participation (Feldman, 2002). In these routines students read, revisit, and react to passages in the Workshop. Routines, such as Shared and Strategic Reading, Oral Cloze, Think (Write)-Pair-Share, and Idea Waves, address vocabulary, fluency, comprehension, writing, or grammar.

Writing instruction is process-based and scaffolded with graphic organizers, writing frames, and sentence starters. Student models of the key writing types as well as support in analyzing writing prompts and choosing appropriate words provide struggling readers and writers with the explicit support they need to develop proficiency in writing independently. Targeted and systematic grammar instruction is integrated in the context of writing.

Differentiated Instruction

READ 180 Enterprise Edition provides teachers with assessment tools and teaching resources to customize instruction with students. Assessments may be used to group students for Small-Group Instruction or to guide focus or reteaching in Whole-Group Instruction. These assessments include the *rSkills* tests, given at designated Checkpoints during the Workshop to assess students' understanding of skills; the SRI, given several times throughout the year to monitor reading comprehension progress through the program; and actionable reports generated from the instructional software. (The SRI provides student reading levels in Lexiles.)

Once students are assessed and grouped, teachers can group students for reinforcement and practice of key reading and writing skills, academic vocabulary, grammar, and other areas during Small-Group Instruction. Instructional strategies and differentiated support are provided in the *rBook* Teacher's Edition. In addition, the Resources for Differentiated Instruction (RDI) provide lessons teachers can use for targeted instruction based on students' needs in reading skills, writing and grammar, and English-language development.

Data Aggregation Through Scholastic Achievement Manager (SAM)

The Scholastic Achievement Manager makes district-level data aggregation and reporting of SRI and other data possible. A data management tool allows users to upload data from local SAM servers to the district aggregation server. SAM can support multiple classrooms and multiple schools on a single server. District capabilities include flexible deployment with various combinations of application servers and aggregation designs. Data migration abilities include importing rosters from Student Information Systems (SIS), exporting into data warehouses in XML format, and transferring students among installations. In addition, SAM uses industry-standard technology and supports server installation to the workstation, with no maintenance utility required.

Administrators will appreciate the ability to implement *READ 180* Enterprise Edition district-wide, as well as conduct analyses such as AYP Demographic Grouping & Reporting and AYP Demographic Filtering for progress monitoring throughout the school year. In addition, the Scholastic Achievement Manager facilitates data-driven, differentiated instruction with advanced reporting, instructional resources available directly from reports, a searchable database of resources, and student software that provides standards-aligned skills assessment.

Support for English-Language Learners

READ 180 Enterprise Edition is designed to promote success for English-language learners by integrating academic language strategies to make content accessible and build English reading comprehension. The program “front-loads” through strategic preteaching of vocabulary needed for comprehension and presents the language appropriate for an upcoming lesson. A number of new features help front-load students’ learning:

- Workshop Anchor Videos help students form mental models, provide a shared context for *rBook* readings, and provide fluent English models.
- Preteaching of five Target Words for each *rBook* Workshop builds vocabulary and knowledge.
- Structured engagement techniques support students in generating ideas and using academic language.
- The *rBook*’s use of Narrow Reading helps students build vocabulary and content concept knowledge in order to successfully access more difficult text.
- Topic Software support provides fluent reading models and oral support for developing fluency in English.
- “Clickable” audio translations of Software passage summaries and Software vocabulary in five languages (Spanish, Cantonese, Haitian Creole, Hmong, and Vietnamese) help students comprehend Topic Software video content.

Looking Forward

Efficacy Studies

READ 180 has been in classrooms across the country since 1999. Results from third-party evaluations show that struggling readers in *READ 180* often show substantial progress in learning to read (Hewes, Mielke, & Johnson, 2006; Interactive, Inc., 2002; Papalewis, 2002; White, Williams, & Haslam, 2005; White & Haslam, 2005). In addition to impressive gains in scores on standardized tests, such as the Stanford Achievement Test-9 (SAT-9), Terra Nova, and the Scholastic Reading Inventory (SRI), anecdotal reports from students and teachers also show significant improvement, as well as important changes in attitudes towards reading and school.

Three large-scale studies provide promising evidence of *READ 180*’s impact. These studies were conducted in the Los Angeles Unified School District (LAUSD); the Department of Defense Schools (DoDEA); and in four large urban school districts in conjunction with the Council of Great City Schools.

Further studies have proven *READ 180* effectiveness with:

- Struggling below grade-level readers (Hewes, Mielke, & Johnson, 2006; Interactive, Inc., 2002; Papalewis, 2002; White, Williams, & Haslam, 2005; White & Haslam, 2005).
- Students with special learning needs (Hewes, Mielke, & Johnson, 2006).
- English Language Learners (Papalewis, 2002; White & Haslam, 2005).

Future Research

Ongoing studies with a growing list of research partners will focus on specific populations of *READ 180* students, as well as on variations of program implementation. Ongoing expansion of the program will use research data as a basis for creating new materials and enhancing existing components. Given the program’s effectiveness with older struggling readers, Scholastic is expanding into community colleges, prisons, and alternative school settings.

REFERENCES

- Adams, M. J. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: MIT Press.
- Biancarosa, G. & Snow, C. E. (2004). *Reading next: A vision for action and research in middle and high school literacy. A report from Carnegie Corporation of New York*. Washington, DC: Alliance for Excellent Education.
- Bishop, A. (2001). An expert's guide to products for the multilingual classroom. *Technology & Learning*, 21 (9), 39–46.
- Blevins, W. (1998). *Phonics from A to Z*. New York: Scholastic Professional Books.
- Blevins, W. (2001). *Teaching phonics and word study in the intermediate grades: A complete sourcebook*. New York: Scholastic Professional Books.
- Braunger, J. & Lewis, J. P. (1998). *Building a knowledge base in reading*. Portland, OR: Northwest Regional Educational Laboratory's Curriculum and Instruction Services.
- The Cognition and Technology Group at Vanderbilt. (1990). Anchored instruction and its relationship to situated cognition. *Educational Researcher*, 2–10.
- Feldman, K. (2002). *Engaged literacy learning: Strategies to maximize student participation*. New York: Scholastic RED.
- Freedman, S. & Calfee, R. (1984). Understanding and comprehending. *Written Communication*, 1 (4), 459–490.
- Gambrell, L. B., Palmer, B., & Codling, R. M. (1993). *Motivation to read*. Washington, DC: U.S. Department of Education, Office of Education Research and Improvement.
- Gerber, M. (1996). Generalization of spelling strategies by learning disabled students as a result of contingent imitation/modeling and mastery criteria. *Journal of Learning Disabilities*, 19, 530–537.
- Goin, L., Hasselbring, T. S., & McAfee, I. (2004). *Executive summary, DoDEA/Scholastic READ 180 Project: An evaluation of the READ 180 intervention program for struggling readers*. New York, NY: Scholastic Inc.
- Guthrie, J. T. & Wigfield, A., Eds. (1997). *Reading engagement: Motivating readers through integrated instruction*. College Park, MD: International Reading Association.
- Hasselbring, T. S. & Goin, L. I. (2004). Literacy instruction for older struggling readers: What is the role of technology? *Reading & Writing Quarterly*, 20(2): 123–144.
- Hewes, G. M., Mielke, M. B. & Johnson, J. C. (2006). *Five years of READ 180 in Des Moines: Middle and high school special education students*. Washington: Policy Studies Associates, Inc.
- Honig, B., Diamond, L., & Gutlohn, L. (2000). *CORE teaching reading sourcebook for kindergarten through eighth grade*. Novato, CA: Arena Press.
- Interactive, Inc. (2002). *Final report: Study of READ 180 in the Council of Great City Schools*. New York: Scholastic Research and Evaluation Department.
- Invernizzi, M., Abouzeid, M., & Gill, J.T. (1994). Using students' invented spellings as a guide for spelling instruction that emphasizes word study. *Elementary School Journal*, 95, 155–167.
- Irvin, J. L. (1998). *Reading and the middle school student: Strategies to enhance literacy*. Boston, MA: Allyn and Bacon.
- Kos, R. (1991). Persistence of reading disabilities: The voices of four middle school students. *American Educational Research Journal*, 28(4), 875–895.
- LaBerge, D. & Samuels, S. J. (1974). Toward a theory of automatic information processing in reading. *Cognitive Psychology*, 6(2), 293–322.

- McGee, R., Share, D., Moffitt, T. E., Williams, S., & Silva, P. A. (1988). Reading disability, behavior problems and juvenile delinquency. In D. H. Saklofske & S. B. G. Eysenck (Eds.), *Individual differences in children and adolescents* (pp. 158–172). New Brunswick, NJ: Transaction Publishers.
- Metametrics, Inc. (2004). The Lexile® framework for reading: Tests & reading series. Retrieved March 15, 2006 from <http://www.lexile.com/DesktopDefault.aspx?view=re&tabindex=1&tabid=33&tabpageid=265>
- Moats, L. C. (1995). *Spelling: Development, disability, and instruction*. Baltimore, MD: York Press.
- Moats, L. C. (1998). *Scholastic spelling*. New York: Scholastic Inc.
- Moats, L. C. (2001). When older kids can't read. *Educational Leadership*, 58(6), 36.
- National Reading Panel. (2001). *Put reading first: The research building blocks for teaching children to read*. Washington, DC: The National Institute for Literacy.
- Papalewis, R. (2002). Struggling middle school readers: Successful, accelerating intervention. *Reading Improvement*, 41(1), 24–37.
- Pelegriño, J. W., Chudowsky, N., & Glaser, R. (2001). *Knowing what students know: The science and design of educational assessment*. Washington, DC: National Academy Press.
- Perie, M., Grigg, W. S., & Donahue, P. L. (2005). *The nation's report card: Reading 2005* (NCES 2006-451). U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office.
- Stanovich, K. E. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly*, 21, 360–407.
- Taylor, R., Hasselbring, T. S., & Williams, R. D. (2001). Reading, writing, and misbehavior. *Principal Leadership* (High School ed.), 2(2): 33.
- U.S. Senate Committee on Labor and Human Resources. *Statement of Dr. G. Reid Lyon*, April 28, 1998.
- Walberg, H. J., et al. (1984). Exceptional performance. *Review of Educational Research*, 54, 87–112.
- Walberg, H. J. & Tsai, S. (1983). Matthew effects in education. *American Educational Research Journal*, 20, 359–373.
- White, R. N., Williams, I. J., & Haslam, M. B. (2005). *Performance of District 23 students participating in Scholastic READ 180*. Washington, DC: Policy Studies Associates, Inc.
- White, R. N. & Haslam, M. B. (2005). *Study of the performance of READ 180 participants in the Phoenix Union High School District 2003–04 and 2004–05*. Washington, DC: Policy Studies Associates, Inc.

 **SCHOLASTIC**
**Professional
Paper**

Margery Mayer
President
Scholastic Education

Francie Alexander
Senior Vice President,
Scholastic Education
&
Chief Academic Officer
Scholastic Inc.

Kristin De Vivo
Vice President
Research & Validation
Scholastic Education

Minda Aguhob, Ed.M.
Manager, *READ 180* Research
Scholastic Education

Joanne Davidson
Director of Instruction, Intervention Group
Scholastic Education



Scholastic Inc.
557 Broadway
New York, NY 10012
1-800-SCHOLASTIC