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Introduction

The nation has seen a steady increase in the number of students eligible to receive special education services since the Education for All Handicapped Children Act was enacted in 1975 and the Individuals With Disabilities Education Act (IDEA) was enacted fifteen years later. According to the Office of Special Education Program’s (OSEP) 30th Annual Report to Congress on the Implementation of the Individuals with Disabilities Act (2008), more than six million students ages 6 through 21, 9.1% of the general student population, were served under IDEA in 2006. At that time, the number of students receiving special education services had increased by approximately 2.3 million since 1977, with the prevalence of learning disabilities increasing by 300% (Dean, Burns, Grialou, & Varro, 2006). Since 1997, the number had increased by approximately 700,000, with adolescents from ages 12 to 17 exhibiting the largest increase, from 10.2% of the general population to 11.6% (U.S. Department of Education, 2008).

The Changing Landscape of Special Education

Over the past three-and-a-half decades, school practices have changed in response to the changing special education landscape such that there is less emphasis on identification and special education services and more on early identification of curriculum-based weaknesses, with interventions taking place in the regular classroom (McCleary, Rowlette, Pelchar, & Bain, 2013). According to OSEP, 95% of students between the ages of 6 and 21 served under IDEA in 2006 were educated in regular classrooms for at least some portion of the school day, with 53.7% being educated inside the regular classroom 80% or more of the day, up from 46.5% in 2000 (U.S. Department of Education, 2008). This is moving in the right direction as federal law mandates that all students served under IDEA be provided with a free and appropriate education in the least restrictive environment; however, it also poses greater challenges for schools and teachers who need to ensure that instruction is catering to students with a wide range of abilities.

As students served under IDEA are receiving more specialized services than ever before, schools are tasked with making sure that the services provided are meeting the diverse needs of the students. Too often teachers lack the tools and resources needed to be able to sufficiently collect data, analyze results, and vary the instructional content to the extent necessary for special education students to get the most out of their regular education classes. As a result, many students with disabilities still struggle to keep up academically with their peers without disabilities. The average eighth-grade proficiency rate for students with disabilities across all state reading assessments was only 38.1% in 2010–2011 (Vang & Thurlow, 2013), and the 2007 National Assessment of Educational Progress reported that only 31% of eighth-grade students with disabilities were able to successfully derive meaning from grade-level text (Vaughn, Wexler, Leroux, Roberts, Denton, Barth, & Fletcher, 2012). These findings are particularly stark in the current educational climate in which all students, regardless of ability, are required to meet the rising demands of the rigorous standards.
A Place for *READ 180 Next Generation*

From its conception, *READ 180* was designed to address the needs of students in special education. The research behind the development of *READ 180*’s innovative software, conducted by Dr. Ted Hasselbring, Professor of Special Education at Peabody College of Vanderbilt University, was funded by a grant from the U.S. Department of Education’s Office of Special Education. Through adaptive technology, individualized instruction, and high interest materials, *READ 180*’s comprehensive program provides the direct, systematic, and personalized instruction necessary to effectively support struggling readers, including those with special needs. The program also offers motivational support that improves student confidence and attitudes toward reading and school.

In response to the new demands of rigorous standards, like the Common Core State Standards (CCSS), Scholastic has expanded its intensive *READ 180* intervention program with the new updates offered in the *READ 180* Next Generation Edition. For struggling readers who can read at approximately middle of the first grade level and demonstrate facility with phonics and decoding, *READ 180* Next Generation offers guidance in mastering oral reading fluency, academic language, text comprehension, writing, and grammar skills. In addition, the program helps to ensure college and career readiness in vital ways: 1) Adaptive technology personalizes instruction for students and provides powerful data to educators for differentiation; 2) A carefully calibrated staircase of text complexity challenges students with complex grade-level text; and 3) Argument writing instruction scaffolds support for students in using textual evidence to defend claims and opinions. These updates reflect the increased reading, writing, and critical thinking demands of rigorous new standards on all students in preparing them to participate successfully in a knowledge-based society.

**About This Report**

This paper demonstrates how *READ 180* Next Generation supports students with special needs and their teachers by applying the most successful, research-proven approaches for teaching and learning. It also shows how the program is aligned with rigorous new standards, as well as how it fits into a Multi-Tiered System of Supports (MTSS) framework that includes Response to Intervention (RTI) and Positive Behavioral Interventions and Supports (PBIS).
Recognizing that raising achievement is everyone’s job, 
*READ 180 Next Generation* is a comprehensive system of 
curriculum, assessment, human capital development, and family 
engagement tools that empower everyone to contribute to our 
struggling students’ reading success. It is designed to meet 
the needs of students whose reading achievement is below 
the proficient level, including those with disabilities. Utilizing 
Universal Design for Learning (UDL) principles, the system 
provides individualized and personalized instruction through 
adaptive instructional software; high-interest literature; whole-
and small-group direct instruction in reading and writing 
skills; and algorithmic grouping support for data-driven 
differentiation. The core components of the system have been 
designed to address literacy and language problem areas for 
intensive, accelerated, and extensive reading instruction.
**READ 180 Next Generation Core Components**

The *READ 180 Next Generation Technology* is grounded in seminal research on cognition and technology conducted by Dr. Ted Hasselbring of Vanderbilt University. The “intelligent software” provides individualized practice for a range of learners. The technology continuously collects data based on individual responses and adjusts instruction to meet each student’s needs at his or her level, thereby accelerating his or her path to reading mastery. As students interact with the Software, they build background knowledge necessary for comprehension, master key vocabulary, and develop, practice, and apply spelling, reading fluency, and comprehension skills and strategies.

*READ 180* Next Generation technology retains the highly effective adaptive instruction model developed by Dr. Hasselbring, and includes the following enhancements:

- **67% More Topic Software.** *READ 180* Next Generation Software includes new content to engage students in Literature and the Arts, as well as a new strand designed to support students’ abilities to make global connections, entitled Your World and Beyond.

- **New Writing Software Linked to Instruction.** The *READ 180* Next Generation Writing Zone in the Software mirrors rBook® small-group writing instruction, and provides scaffolded support for composing, revising, and publishing writing in response to Software topics.

- ***READ 180* Next Generation eReads.** The eReads offer students online access to leveled articles aligned to the Topic Software, allowing students to apply and extend skills and knowledge with more rigorous content. The eReads include audio support for both content and metacognitive strategies, as well as questions and activities that encourage students to apply higher-order thinking skills as they process information and ideas from the article.

The *READ 180* Next Generation Teacher, Leadership, and Student Dashboards are command stations that facilitate effective teaching, leading, and learning. The dashboards help schools and districts develop human capital by providing teachers and leaders with all the tools they need for successful implementation, along with resources to further develop their expertise and to share knowledge and experiences with peers.

The Teacher Dashboard provides teachers with comprehensive support for effective teaching and data-driven differentiated instruction, including the following elements:

- **Data Snapshots and Daily Instructional Overviews** give teachers an at-a-glance view of all their *READ 180* Next Generation instruction and allow teachers to analyze data to inform instruction.

- **The Groupinator®,** located on the Class Page, makes data actionable through a patent pending algorithm that assigns students to groups based on level or skill and recommends resources for differentiated instruction. The Class Page also provides access to lesson plans aligned to the CCSS and individual state standards.

- **The Report Scheduler** supports data-driven instruction by allowing teachers to schedule Best Practices reports summarizing student performance data and have them emailed to their inboxes on a regular basis.

- **Notifications** allow teachers to opt into weekly email notifications informing them of student progress in *READ 180* Next Generation Software, *Scholastic Reading Counts®* Quizzes, and *Scholastic Reading Inventory* (SRI) Lexile® scores.
• The Interactive Teaching System (ITS) gives teachers anywhere, anytime point-of-use access to the *rBook* Teacher’s Edition, with a projectable student *rBook*, Anchor videos, Professional Development Routines and Videos, and *Resources for Differentiated Instruction (RDI)* Books 1, 2, and 3. There are also additional supports for teacher-directed instruction, including a daily Do Now, scaffolded support for Small-Group instruction, and a daily Wrap-Up.

• The dynamic Professional Development support feature provides daily instructional videos and supports for on-the-job professional development.

The Leadership Dashboard provides school and district leaders with clear visibility into *READ 180* Next Generation implementation metrics, allowing for greater ability to course-correct in real time. The Leadership Dashboard includes the following elements:

• Data Snapshots provide leaders access to an at-a-glance look at school-wide or district-wide performance on all *READ 180* Next Generation assessments.

• The Data Breakdown allows leaders to access an overview of implementation data for their districts or schools, and also drill down to view school- or student-level data in order to effectively monitor the implementation of *READ 180* Next Generation.

• Notifications and the Report Scheduler allow leaders to receive notifications about program usage data and to schedule reports summarizing school and district performance data.

The Student Dashboard supports students in building executive function and in taking ownership over their own learning. Through the Student Dashboard, students can track their progress in the Software and view their overall program progress. Furthermore, the Student Dashboard’s motivation system helps students keep track of their personal “Bests” and their streaks in the Software. The Student Dashboard includes the following elements:

• My Dashboard provides actionable data throughout the year about what students know and can do.

• Reports on key elements of student performance support students to identify strengths and challenges, to plan for improving the quality of their work, and to understand what they have achieved.

• My Reads allows students to collect and rate books and eReads from diverse cultures and time periods.

• eReads expand student interest in the content areas covered in *READ 180* Next Generation Topic Software segments.
The *READ 180 Next Generation rBook*, created by Dr. Kate Kinsella and Dr. Kevin Feldman, provides daily instruction in critical reading, vocabulary, writing, 21st century learning, and grammar skills, with a clear path for whole- and small-group Daily Differentiated Instruction. The *rBook* Teacher’s Edition incorporates proven instructional routines that develop high-utility academic vocabulary and language, comprehension, grammar, and multi-paragraph writing, using instructional content that engages students as they work alongside the teacher in the *rBook* Pupil’s Edition. Teachers are provided with guidance for direct and differentiated instruction, teacher modeling, application, and opportunities for anchoring instruction, pre-teaching, and re-teaching. The *READ 180 Next Generation rBook* Teacher’s Edition includes:

- Clear content area connections;
- An explicit progression of Text Complexity across each workshop;
- Extended writing to include multi-paragraph writing instruction;
- Workshop Wrap-Up Projects in which students apply skills acquired in each workshop;
- Career- and workplace-focused readings;
- 21st Century literacy instruction;
- Summarizing taught in every workshop; and
- Intensive support for data-driven differentiation.

**Resources for Differentiated Instruction (RDI) Books** provide teachers with the differentiated support needed to remediate, re-teach, and accelerate students’ learning in reading, writing, and grammar. *RDI Book 1, Reading Skills and Strategies*, and *RDI Book 2, Writing and Conventions Strategies*, include resources for re-teaching targeted skills to students who need additional support, as well as more challenging texts and activities for students who are ready for a stretch. *RDI Book 3, Strategies for English Language Learners*, provides specific strategies with each lesson for teaching ELs who are at various levels of proficiency. *RDI Book 4, Assessment Strategies and Practice*, is a resource for whole-group and small-group instruction that builds the habits of mind necessary for success on performance assessments.

**READ 180 Next Generation Audiobooks, Paperbacks, and eReads** provide students with daily opportunities for modeled and independent reading, with high-quality fiction and nonfiction materials, in order to transfer and reinforce skills, develop reading fluency, and build reading stamina both in print and online. Audiobooks give struggling readers the opportunity to hear good reading models while accessing authentic grade-level literature. *READ 180 Next Generation* includes more books and more choice with an expanded library containing 50% fiction and 50% nonfiction, offering students age-appropriate, relevant, leveled books that they can read with success. *READ 180 Next Generation* eReads allow students to access additional nonfiction reading aligned to Topic Software nonfiction reading from school, home, or anywhere they have internet access.

**READ 180 Next Generation’s Family Portal** helps families connect to the *READ 180 Next Generation* classroom and support students’ progress. The online Family Portal is accessible from any internet connection, and provides families with information about *READ 180 Next Generation* instruction and materials, resources for supporting student achievement, and a venue to share success stories and experiences.
The Instructional Model

The READ 180 Next Generation instructional model is a research-based design for explicit, direct instruction and classroom organization for intensive intervention for struggling readers, including those with special needs. It provides a simple and clear organization for whole- and small-group instruction. As shown below, instruction begins and ends with whole-group, teacher-directed instruction. In between the whole-group lessons, students are divided into three groups and rotate among three areas in the classroom: small-group instruction, independent reading, and individual practice on the Software. This instructional model enables the acceleration of struggling readers toward grade-level proficiency through a proven balance of direct instruction, small-group differentiation, and individual practice. As the Compendium of READ 180 Research details, studies have shown that when schools implement and follow the standard 90-Minute Instructional Model, or a comparable flexible model, students achieve significant gains in reading proficiency after one to two years of program participation (Scholastic, 2011).
RESEARCH FOUNDATIONS

READ 180 Next Generation is informed by an extensive body of literature about best practices for serving older struggling readers, including those with special needs. In the following section, for each curriculum and instructional element of the program listed below, relevant information from the research base and expert opinion is presented alongside descriptions of how these research foundations have been translated into the program design and curriculum in support of students with special needs.

Curriculum and Instructional Elements of READ 180 Next Generation:

Supporting Students With Special Needs

- Students With Special Needs
- Students With Dyslexia and Specific Learning Disabilities
- Students With Autism Spectrum Disorder (ASD)
- Students With Attention Deficit Hyperactivity Disorder (ADHD)
- Comprehensive Support for Teachers, Administrators, and Families

Maximizing Student Engagement and Learning

- Student Ownership Over Learning
- Principles of Cognition and Learning

Aligning to Rigorous Standards

- Reading Standards
- Writing Standards
- Speaking and Listening Standards
- Language Standards

Personalizing Instruction With Universal Design for Learning Principles

- Adaptive Technology
- Immediate Corrective Feedback
- Background Knowledge Development Through Anchored Instruction
- Section 508 Compliance—Closed Captioning and Alternate Color Scheme
- Efficient Screening, Placement, and Progress Monitoring Assessments
Supporting Students With Special Needs

Effective adolescent literacy interventions must include systematic support for differentiating instruction and ensuring that all struggling readers receive the support they need to achieve success. *READ 180 Next Generation* includes extensive resources, designed to fit within a Multi-Tiered System of Supports (MTSS) framework that includes Response to Intervention (RTI) and Positive Behavioral Interventions and Supports (PBIS) to help teachers use data to inform instruction and intervention and to provide targeted academic and behavioral support to students with special needs.
All Students With Special Needs

- Response to Intervention (RTI) is a multi-level system for maximizing student achievement by integrating ongoing assessment of student progress with increasingly intensive intervention (National Center on Response to Intervention, 2010). RTI organizes intervention into multiple tiers of increasingly intense interventions for those students not making adequate progress in Tier 1 (Feldman, 2009). Tier 2 and 3 interventions are intensified by increasing instructional time, decreasing group size, matching materials to students’ levels, modifying presentation modes, and providing corrective feedback.

- RTI supports progress monitoring for all students. In all tiers of intervention, students benefit from teachers’ use of data to determine whether students are making the desired academic gains, and then whether they need modifications in their curricula, materials, or instruction (Fuchs, L.S., & Fuchs, D., 2007; Duffy, 2008).

- Collecting ongoing data on student progress is vital to documenting student growth, planning instruction, and determining the need for intervention (Fisher & Ivey, 2006; National Joint Committee on Learning Disabilities, 2008; Stecker, Fuchs, L. S., & Fuchs, D., 2005; Torgesen, 2002). Streamlining the regular collection and examination of data, as well as modifying instruction based on what is learned from student data, can benefit all students and can be a powerful tool to help make a teacher’s job more efficient rather than more difficult (Duffy, 2008).

- For special needs students, it is particularly important to use student performance assessment data to monitor progress in order to determine continuing instructional/remedial needs (National Joint Committee on Learning Disabilities, 2008).

- Differentiated instruction meets students where they are—matching instruction to meet their different assessed needs. Research demonstrates that differentiated instruction can significantly improve student achievement (Allan & Goddard, 2010). For students with special needs, individually targeted instruction in reading skills can improve reading achievement, both in the targeted skill and in more generalized measures of literacy (Shanahan, 2008; Vaughn & Denton, 2008).

- Poor readers in high school can improve .5 standard deviations in reading after receiving expert, intensive, closely monitored, theoretically sound, comprehensive, integrated instruction for 70 hours (Morris, Lovett, Wolf, Sevcik, Steinbach, Frijters, & Shapiro, 2012).

- In a recent research synthesis by Wanzek and colleagues, strong evidence was found to support three instructional recommendations for students with reading difficulties in Grades 4 to 12: 1) provide explicit vocabulary instruction; 2) use direct and explicit comprehension strategy instruction; and 3) provide struggling readers with intensive and individualized interventions. From this finding, the authors recommended intensive intervention efforts for students with reading difficulties in Grades 4 through 12 who do not perform at or near grade level, and supplemental, small-group instruction for extended periods of time (Wanzek, Vaughn, Scammacca, Metz, Murray, Roberts, and Danielson, 2013).

- Teachers who rely mostly on whole-group instruction do not adequately meet the individual needs of students who need extra literacy support. Instead, teachers can use performance data to form small groups of students and teach lessons to target their specific skill needs. Students with special needs particularly benefit from this type of targeted intensive instruction in small and flexible groups (Avalos, 2006).

- Positive Behavioral Interventions and Supports (PBIS) models provide clearly defined expectations explicitly taught to all students, opportunity for students to practice the skills, reinforcement for students who meet expectations, and a system for monitoring student progress (Lane, Robertson, & Graham-Bailey, 2006; Sugai, & Horner, 2002). PBIS models have been found to be particularly effective in helping students with emotional and behavioral challenges stay on track and experience success (Sugai, Sprague, & Horner, 1999).
READ 180 Next Generation Delivers

READ 180 Next Generation can help educators meet the needs of students in both general education and special education through a Response to Intervention (RTI) approach, which is a systematic framework for allocating instructional services and resources in response to students’ individual needs. As illustrated in the figure below, an RTI framework employs a multi-tiered model of service delivery to promote efficient response to students’ needs. Each tier provides increasingly intensive support structure to ensure that students succeed.

The READ 180 Next Generation instructional model supports multiple tiers by balancing whole-group instruction with small-group instruction that is targeted to different skills based on students’ needs. During whole-group instruction, the teacher focuses on “macro”-level skills that all students need. Then, students break into small groups to address their individual needs through adaptive instructional Software, leveled books, and small-group direct instruction in reading. While one small group works on the Topic Software that continuously assesses and provides targeted instruction, another group reads Paperbacks and eReads independently at the appropriate reading level based on the Lexile Framework® for Reading. This instructional model allows teachers to work with a chosen small group to address individual needs based on assessment data.

The READ 180 Next Generation offers powerful tools for the systematic screening and progress monitoring that are central to an RTI approach, along with customizable training and professional development; to ensure that teachers can use the program with a wide array of students, including students with special needs. Information on how READ 180 Next Generation fits within an RTI approach is included throughout this paper; however, for a more detailed description of how the program aligns with an RTI framework, please see Response to Intervention: An Alignment Guide for READ 180 (Scholastic, 2008).

The PBIS model, which is incorporated throughout READ 180 Next Generation, provides embedded supports and procedures for increasing student engagement, promoting positive behaviors, and motivating students to succeed. Instructional routines such as Oral Cloze, Think (Write)-Pair-Share, Idea Wave, numbered heads, and peer feedback encourage students to engage with the material with scaffolds that structure and support their responses. The instructional routines help to create a learning environment in which students can actively participate in a non-threatening and flexible way.
Students With Dyslexia and Specific Learning Disabilities

- Of the 6.7 million students enrolled in special education programs, 41% have been identified as having a specific learning disability (Snyder, Dillow, & Hoffman, 2008).

- It is estimated that a full 80% of those with specific learning disabilities (or 4.6% of the total public school population) have a primary disability in reading. Furthermore, research suggests that another 15–20% of the total school population exhibit symptoms of dyslexia, such as difficulty with reading, writing, or spelling, even though they may not receive special education services (International Dyslexia Association (IDA), 2007; Shaywitz, 2003).

- Dyslexia is a language-based disability that affects both oral and written language. It may also be referred to as a reading disability. The most common educational difficulties experienced by students with dyslexia are in the areas of decoding, spelling, communicating ideas through writing, and reading comprehension (Shaywitz, 2003).

- Increasingly, schools are using RTI to identify students with dyslexia. In the RTI process, school personnel monitor students’ responsiveness to tiers of intensive, targeted reading instruction. If a student does not meet performance benchmarks with the intervention, and other developmental disorders are ruled out, then the student may be identified as having a reading disability. Based on the diagnosis, teachers can then tailor the reading intervention to the student’s particular instructional needs (Shaywitz, Morris, & Shaywitz, 2008).

- According to Shaywitz (2003), effective intervention programs for students with reading disabilities: 1) provide systematic, direct instruction in phonemic awareness and phonics; 2) teach students to apply these skills to reading and writing; 3) provide fluency training; and 4) include rich experiences listening to and using oral language.

- For all students, especially those with reading difficulties, speech/sound blending supports word recognition, spelling supports vocabulary, understanding of morphology speeds word recognition, and oral language capacities are the underpinning for written language (Moats, 2012). Additionally, for students with dyslexia, handwriting, spelling, and sentence composition support higher level composition (Berninger & Wolf, 2009).

- Interventions for students with dyslexia should be systematic, explicit, and multisensory. Many individuals with dyslexia require one-on-one help so that they can move forward at their own pace. In addition, students with dyslexia often need a great deal of structured practice and immediate, corrective feedback to develop automatic word recognition skills (IDA, 2012).

- The principles of Universal Design for Learning (UDL) support providing multiple pathways for students to access and engage with content, and demonstrate learning. Research reveals that UDL yields benefits, such as improved access to and participation in the general education curriculum for all students, including those with specific learning disabilities (National Joint Committee on Learning Disabilities, 2008).
READ 180 Next Generation Delivers

In the READ 180 Next Generation Software, extensive phonics instruction is provided through individualized, modeled practice in structural analysis and continued work on phoneme articulation, coupled with immediate, corrective feedback. Modeled examples of correct articulation of sounds are further presented in READ 180 Next Generation Audiobooks and during teacher-led instruction. A Reading Coach on the Audiobooks models fluency, comprehension, vocabulary, and self-monitoring strategies at important points during reading. Students thus experience firsthand the strategies of a good reader throughout the supported reading of each grade- and age-appropriate book.

READ 180 Next Generation offers students multiple means of expressing their learning through words and writing. In the Software, students read and record text passages to practice and demonstrate fluency. All Software, paperbacks, and Audiobooks include QuickWrites and graphic organizers to allow students to show comprehension in a way that suits their needs. Assessments in both software and print format offer multiple means for students to demonstrate their knowledge.

READ 180 Next Generation instructional materials are designed with the principles of Universal Design for Learning (UDL) to facilitate access to the curriculum for all students by individualizing and differentiating instruction according to students’ reading levels, skill proficiency, and interests. A multisensory instructional approach allows for multiple means of representation of learning materials. For example, the Software, independent reading books, Audiobooks, Anchor Videos, the rBook, and teacher-directed lessons offer variety as a means of accessing lesson content. In addition, the Software includes captioning of Anchor Videos, an alternate color scheme, and a button rollover feature that provides a text label as well as an audio prompt for the Software buttons. READ 180 Next Generation content consistently presents images, graphics, and sound alongside printed and electronic text, providing daily opportunities for different types of learners to engage their visual, auditory, and tactile senses.
Students With Autism Spectrum Disorder (ASD)

- The National Institute of Mental Health (NIMH) defines Autism Spectrum Disorder (ASD) as a group of developmental brain disorders that can result in a wide range of symptoms, skills, and levels of impairment, or disability. While symptoms vary from child to child, they generally fall into three categories: social impairment; communication difficulties; and repetitive and stereotyped behaviors (NIMH, 2011).

- Although students with ASDs are a heterogeneous group in terms of cognitive and language abilities, the No Child Left Behind Act (NCLB) of 2001 and the Individuals With Disabilities Education Act (IDEA) of 2004 mandate that all children, including children with ASDs, be taught to read in ways that are consistent with reading research (Whalon, Al Otaiba, & Delano, 2009).

- An effective treatment program for children with ASDs should include the following criteria: 1) capitalize on student interests; 2) offer a predictable schedule; 3) teach tasks as a series of simple steps; 4) actively engage students’ attention in highly structured activities; and 5) provide regular reinforcement of behavior (NIMH, 2009).

- Common features of effective intervention programs for students with ASDs include: providing focused and challenging learning activities at the proper level; having one-on-one time with the teacher and small-group learning activities; providing activities that meet a specific learning goal; measuring and recording progress and adjusting the intervention as needed; and providing a high degree of structure, routine, and visual cues (Myers & Johnson, 2007).

- Assistive technology can help to support autistic students’ ability to participate in the curriculum by facilitating independence, increasing success, building confidence, lessening frustration, and improving behavior (Boroson, 2011).

- Current research suggests that children with ASDs process sensory information such as sound, touch, and vision differently than typically developing children (Russo, 2010). Many students with ASDs learn much better through some senses than others (Boroson, 2011).

- Research shows that guided practice with recognizing and generating sounds, accompanied by a speaker’s face that models articulation, can help autistic students perceive and generate the sounds of English (Bosseler & Massaro, 2003).

- Recognizing, addressing, and supporting the strengths and challenges of students with ASDs allows teachers to recognize their abilities rather than their disabilities. By focusing on abilities, instruction can incorporate innovative approaches that benefit all students (Boroson, 2011). Current work in the area of Positive Behavioral Interventions and Supports (PBIS) emphasizes the relationship between positive school- and classroom-wide culture and individual student success (Sugai & Simonsen, 2012).
**READ 180 Next Generation Delivers**

*READ 180* Next Generation instruction is very structured so as to provide students with a predictable schedule and routine. In a 90-minute model, every lesson begins with 20 minutes of whole-class instruction, followed by 60 minutes of small group work that includes rotations among three stations, and concluded with 10 minutes of whole-class wrap up. The three rotations always consist of one of the following: small-group direct instruction; independent work using *READ 180* Next Generation’s computer-assisted instructional (CAI) software; and modeled or independent reading. This allows students with ASDs to focus on learning and to minimize anxious or disruptive behavior. Students are reassured by knowing that each class period will follow a specific structure.

Multiple means of engaging students are included in *READ 180* Next Generation through the Software, and small-group, whole-group, and independent activities. In particular, technology is a motivating learning medium for students and includes a supportive on-screen host to help keep students engaged. The technology provides individualized instruction suited to each student’s needs, in a predictable and consistent format. Multi-sensory instruction is also provided that allows students to access the curriculum and integrate new knowledge through visual, auditory, and tactile pathways. In addition, the wide variety of age-appropriate, high interest, leveled texts in *READ 180* appeal to learners with varying interests, backgrounds, and reading levels. To help ensure that students are matched with texts that will engage and motivate them, all of the *READ 180* Next Generation library books, the Topic Software passages, and the eReads are leveled using the Lexile Framework.

*READ 180* Next Generation provides a variety of progress monitoring assessments to regularly track student progress, including rSkills® tests and passages for oral fluency assessment in RDI 1. Teachers can use these assessments to inform small-group instruction. In the Topic Software, targeted assessments check for mastery of skills and identify individual instructional needs. *READ 180* Next Generation reports provide diagnostic data to help teachers understand individual needs, target key skills, monitor growth, and compare progress with peers.
Students With Attention Deficit Hyperactivity Disorder (ADHD)

• Attention Deficit Hyperactivity Disorder (ADHD) is defined by the American Psychiatric Association (APA) as a persistent and pervasive pattern of disruptive behavior characterized by behaviors such as inattention, hyperactivity, and impulsivity (APA, 2000). An analysis of the worldwide prevalence of ADHD in children and adolescents found that it was 5%, with greater percentages found in North America (Polanczyk, de Lima, Horta, Biederman, & Rohde, 2007).

• The co-occurrence of ADHD and dyslexia has received increased notice as the disruption of attentional mechanisms that occurs with ADHD has been suggested as a possible cause of reading difficulties (Shaywitz & Shaywitz, 2008). Common features of the two disorders include core deficits in attention and response inhibition, processing speed, and working memory (Sexton, Gelhorn, Bell, & Classi, 2012).

• ADHD and learning disorders co-occur in 3.7% of children, with a higher prevalence rate in boys than girls. This is a higher percentage than the 0.2% that could be accounted for by chance (Pastor & Reuben, 2008).

• Evaluating the relationship between ADHD and reading disorders in relation to intervention efficacy has been identified as an important direction for future research (Eden & Vaidya, 2008).

• In the research that has been conducted, findings indicate that multiple domains of reading skill should be measured when conducting psychoeducational assessments as the attentional and processing problems evident in those with co-occurring ADHD and reading disorders may be missed by assessments that do not assess reading rate and oral decoding as well as silent reading tasks (Ghelani et al., 2004). Moreover, as slower processing speeds have been evidenced, this suggests that assessments should allow for extra time. This accommodation is commonly given to children with reading disorders but not for children with ADHD (Sexton et al., 2012).

• Interventions that emphasize phonological awareness instruction in small groups or in one-on-one tutoring have been shown to be effective in the prevention and remediation of reading disorders (Alexander & Slinger-Constant, 2004), and presumably with the additive problems of children with ADHD and reading disorders (Sexton et al., 2012).
**READ 180 Next Generation Delivers**

*READ 180 Next Generation offers a wealth of resources for differentiating and adapting instruction based on students’ needs. The Topic Software provides individualized instruction, along with immediate corrective feedback accompanied by modeling and guided practice. Small-group lessons that focus on syllabication and phonics, including phonological awareness, are provided in the rBook. RDI Book 1 also presents additional resources for providing differentiated, direct instruction in phonemic and phonological awareness, phonics, and syllabication. RDI Book 1 complements and supports the skill development presented in the rBook, Topic Software, and reading libraries with resources that include lessons, instructional routines, student practice pages, reading passages, graphic organizers, and classroom management materials for use as necessary to meet individual students’ needs.*

*Scholastic Reading Inventory can be used to screen students and place them in the correct level of the Topic Software. Scholastic Reading Inventory is a computer-adaptive test that increases or decreases in difficulty based on student responses to the questions. If a question is answered correctly, the next question will be harder; if the student answers a question incorrectly, the next question will be easier. This continues until a strong level of certainty of the test taker’s ability has been established. The test then ends; it is not timed, so students can take as long as they need to complete it.*

*By collecting ongoing data about student performance, teachers are provided with critical information about student progress and individual needs. The Teacher Dashboard allows teachers to efficiently group students according to their needs for targeted follow-up instruction, while the Student Dashboard encourages students to take ownership over their own learning.*
Comprehensive Support for Teachers, Administrators, and Families

• Systematic monitoring of student progress and program implementation at the classroom, school, and district levels is critical to sustaining on-model implementation of an adolescent literacy intervention (Salinger, Moorthy, Toplitz, Jones, & Rosenthal, 2010).

• To provide optimal support for adolescent literacy interventions, teachers, principals, and administrators should have easy access to data to inform student-level, school-level, and district-wide decision making (Carnegie Council on Advancing Adolescent Literacy, 2010).

• Although teachers and administrators have limited time to collect and analyze data, technology can help make assessment and monitoring more efficient (Bransford et al., 2000). The National Education Technology Plan (U.S. Department of Education, 2010) calls for a model of “connected teaching” in which teachers leverage technology to use data to inform instruction, as well as to connect to professional development resources and online learning communities.

• A strong base of research evidence demonstrates that student achievement is positively impacted when schools, families, and communities partner to support student learning (Mapp & Henderson, 2002).

• Especially for groups of students considered at higher risk academically, research suggests that determined parental engagement and community connectedness play critical roles in bolstering academic achievement and protecting against potentially negative contextual influences (Maton, Hrabowski, & Greif, 1998).

READ 180 Next Generation Delivers

READ 180 Next Generation provides multiple supports for teachers and administrators to assist them in planning instruction and maintaining high-quality implementation of the program for maximum effectiveness. The Teacher and Leadership Dashboards provide teachers and administrators with easy, efficient access to critical data in a variety of formats. The Teacher Dashboard provides unprecedented support for monitoring learning and differentiating instruction—critical to effective intervention. Through the Teacher Dashboard, the teacher can:

• Use the Reports Scheduler to run reports that provide information about student performance

• Analyze data and results to inform instruction, using Data Snapshots

• Plan effective instruction

• Access Data-Driven Check Points that provide guidance on reviewing and re-teaching skills based on Software and rSkills report data

• Use the Groupinator grouping tool to group students for differentiated instruction tailored to their needs

• Access rubrics and grade student performance on rSkills, the Writing Zone, and the Success Zone through the Scholastic Achievement Manager (SAM) Student Digital Portfolio
• Opt to receive Notifications that alert teachers to relevant data points, such as Low Average Session Length alerts

• Access dynamic, daily Professional Development

• Participate in a community of educators and access all resources using a single sign-on, through the Gateway

Like the Teacher Dashboard, the Leadership Dashboard allows administrators to easily access data about student progress and program implementation. Leaders are able to view information about software usage at the district or school level, as well as track each class’s progress on SRI, rSkills tests, and Scholastic Reading Counts! quizzes. In addition, the Leadership Dashboard provides administrators access to professional development and technical and peer support around best practices for achieving implementation success. These tools and resources enhance leaders’ ability to monitor fidelity of implementation and to identify and correct problems as they occur.

READ 180 Next Generation also provides resources to help families support students’ learning and connect with the READ 180 Next Generation classroom. Families and caregivers can connect to the Family Portal from any Internet connection to learn about READ 180 Next Generation instruction and materials. The site includes many videos that provides tips for families on how to support their children’s literacy achievement, and offers links to additional resources and research to help caregivers understand the needs of struggling readers. In addition, the Family Portal provides a space for sharing success stories and experiences with teachers and other READ 180 Next Generation families.
Maximizing Student Engagement and Learning

The design of READ 180 Next Generation is fundamentally driven by respect for the needs of students, teachers, and school and district leaders. Understanding that reader characteristics such as working memory, background knowledge, and the use of cognitive learning strategies are linked to reading comprehension (Cutting & Scarborough, 2006), the instructional program harnesses brain research to enhance students’ ability to connect to and retain new information—and READ 180 Next Generation includes more resources than ever to encourage students to take ownership over their own learning. Enhanced resources for teachers and leaders provide comprehensive support for implementing the program with maximal effectiveness.
Student Ownership Over Learning

- Most students – but especially those with disabilities – need help in learning executive function skills, such as, how to plan, organize, and express ideas (Gersten & Baker, 2001; Troia & Graham, 2002).

- Research shows that systematic instruction and practice can help all students, particularly those with learning disabilities, learn executive function skills such as setting goals, planning, organizing and prioritizing materials, managing time, being cognitively flexible, self-monitoring, and self-reflecting (Meltzer, 2007; Leu, 2000; Harris & Graham, 1992).

- Setting clear goals and expectations encourages student involvement in and responsibility for their own learning (Bransford, Brown, & Cocking, 2000). Neuroscientific brain research shows that when students understand the goals of their work, they are more likely to stay focused, self-monitor, and appreciate their own progress (Rose, Meyer, Strangman, & Rappolt, 2002).

- Cognitive strategy instruction that includes self-monitoring and self-questioning is particularly effective for students with disabilities. Cognitive learning strategies enable students with disabilities to learn to complete tasks independently (Berkeley, Mastropieri, & Scruggs, 2011).

- Self-efficacy is an important component of strategy instruction as the strategies themselves are only beneficial when students are motivated to maintain their use after instruction. Providing feedback that helps students make accurate connections between their efforts and their successes increases motivation, self-efficacy, and skills. This is especially important for students with disabilities who often inaccurately attribute success to high ability rather than increased effort (Berkeley et al., 2011).

- Students experience greater motivation and confidence when they are aware of their ongoing academic successes and have the ability to track their own progress (Pressley, Gaskins, Soric, & Collins, 2006). When students with disabilities have knowledge about their learning, it strengthens their adaptive and performance skills, as well as their reading comprehension (Shany, Wiener, & Feingold, 2011).

- Self-directed technology increases students’ sense of independence and engagement by giving them control of the screen and their progress (Hasselbring, Lewis, & Bausch, 2005).
READ 180 Next Generation Delivers

The Student Dashboard in READ 180 Next Generation supports students in building executive function and taking ownership over their own learning. My Dashboard provides actionable data throughout the year about what students know and can do. Tools for self-directed goal setting and planning allow students to track their progress in each Topic Software Zone. The dynamic News Feed publishes student progress and data, such as personal bests and accomplishments like completed quizzes, “streaks” of correct answers on Topic Software Quick Check Questions, and Lexile gains. Reports on key elements of student performance support students’ abilities to identify strengths and challenges, to plan for improving the quality of their work, and to understand what they have achieved. Additionally, students can monitor their time on the Software, providing them practice with planning and time management skills. This access to information about their progress and achievements not only motivates students, but also builds their awareness of who they are as learners, and guides them in setting and working toward academic goals.

The Student Dashboard also includes My Reads and My eReads which allow students to engage in further readings on topics of their own choosing. In My Reads, students can collect and rate books and eReads from diverse cultures and time periods. In My eReads, online, leveled texts are accessible that expand student interest in the content areas covered in READ 180 Next Generation Topic Software segments.

Throughout READ 180 Next Generation, students are provided with opportunities to take initiative in learning, along with support in the skills necessary to be successful. For example, students can choose to access eReads that extend what they are learning in the Topic Software. These eReads allow students to deepen their knowledge and challenge themselves with more rigorous content, with the aid of built-in support for comprehension and critical thinking. Wrap-Up projects at the end of every workshop guide students in reflecting on and synthesizing their learning. Each Wrap-Up project is carefully scaffolded to help students acquire the planning and organizational skills they need to carry out the project and clearly demonstrate their learning.

Student Dashboard
Principles of Cognition and Learning

- Universal Design for Learning (UDL) is primarily based upon three principles: Provide Multiple Means of Representation; Provide Multiple Means of Action and Expression; and Provide Multiple Means of Engagement. These principles were derived from the three learning networks of the brain: Recognition Networks (the “what” of learning); Strategic Networks (the “how” of learning); and Affective Networks (the “why” of learning). Since at any given moment in learning all three networks are at play, when planning or designing technology the individual variation in all three networks must be considered (Center for Applied Special Technology (CAST), 2011).

- Technology environments can increase students’ sense of competency and heighten their motivation to become independent readers and writers (Kamil, Intrator, & Kim, 2000). Additionally, computer-assisted interventions can increase literacy outcomes for students at risk for reading difficulties (Swanson et al., 2011).

- Working memory plays a major role in comprehending text as it holds recently processed information to make connections to the latest inputs and it maintains the gist of information for the construction of an overall representation of a text (Swanson & O’Connor, 2009).

- Students with disabilities evidence working memory problems; however, management of working memory loads in structured learning activities can help these students deal with their working memory problems more effectively (DeWeerdt, Desoete, & Roeyers, 2012).

- An effective way to assist students, especially those with disabilities, in retaining information is to deliver information in manageable chunks. Working memory is enhanced when people can group information into patterns and make associations among concepts (Bransford et al., 2000; Metiri Group, 2008). For example, words presented in an organized, structured way are better remembered than those that are randomized (Medina, 2008).

- Information is more readily processed if it can be immediately associated with information already present in the learner’s brain. Providing examples makes the information better encoded and therefore better learned (Medina, 2008).

- The brain needs to repeatedly activate connections between neurons in multiple ways to strengthen them (Zadina, 2008). For example, repeated reading of the same text has been shown to be an effective technique for building automaticity (National Reading Panel, 2000), as well as literacy achievement for students at risk for reading difficulties (Swanson, Vaughn, Wanzek, Petscher, Heckert, Cavanaugh, Kraft, & Tackett, 2011). Technology is also a particularly effective method of fostering automaticity and achievement because it affords students repeated opportunities to systematically practice new skills until they are mastered (Hasselbring & Goin, 2004).

- Learning is enhanced when students feel motivated. Research has shown a strong association between motivation and reading proficiency for all students (Torgesen, Houston, Rissman, Decker, Roberts, Vaughn, Wexler, Francis, Rivera, & Lesaux, 2007), and particularly for students with learning disabilities (Heo, 2007; Sideridis, Mouzaki, Simos, & Protopapas, 2006).

- Motivation is increased when the instructional level is set at the appropriate level of difficulty to help ensure that students experience success and gain academic confidence (Biancarosa & Snow, 2004; Pressley et al., 2006; Vaughn & Denton, 2008).

- Peer collaboration enhances learning and motivation, especially for adolescents. For example, research shows that discussing books and sharing reading experiences with peers is motivating to students (Pressley et al., 2006). Collaborative strategic reading that includes extended discussion of text meaning and interpretation is effective for middle school students with disabilities (Solis, Ciullo, Vaughn, Pyle, Hassaram, & Leroux, 2012).
**READ 180 Next Generation Delivers**

*READ 180 Next Generation* instruction is built on principles of how the brain learns best. For example, the *READ 180 Next Generation* Software is designed to enhance learning and retention of new information by capitalizing on two important principles of cognition: 1) short-term memory is limited in the number of items it can store simultaneously; and 2) repetition of new skills is critical to strengthening connections in the brain. The FASTT (Fluency and Automaticity through Systematic Teaching with Technology) algorithm underlying the Software provides students with repeated, structured practice with limited sets of new material. This systematic pacing of skills practice efficiently moves students to fluency and automaticity.

The *READ 180 Next Generation* Software also reflects important principles of engagement and motivation—critical for struggling readers. The Student Dashboard acts as a powerful motivator for students, as they are able to track their own progress, celebrate their achievements, and take ownership over their own learning. Anchor media are used to engage students and build background necessary for comprehension before they start reading. The adaptive technology customizes and personalizes instruction according to students’ levels. On-screen hosts in the Software provide patient encouragement to students, along with the private, immediate corrective feedback that can be particularly beneficial to students with special needs. Universal Design for Learning (UDL) principles in the technology help further bolster the confidence of students with special needs.

Like the *READ 180 Next Generation* Software, *rBook* instruction includes multiple features that engage students and motivate them to achieve. For example, during teacher-led lessons, structured engagement routines, such as the Think (Write)-Pair-Share routine, encourage participation and accountability. Small-group discussion and activities harness adolescents’ enthusiasm for learning through collaboration with peers. Throughout, the gradual release approach used in all *READ 180 Next Generation* instruction ensures that students gain confidence as they move from full support to independent work, taking on increased responsibility for their own learning.

*READ 180 Next Generation* Paperbacks, Audiobooks, and the *rBook* are also designed to capture the interest of adolescent readers. All texts are matched to students’ reading levels, providing struggling readers the opportunity to experience success and enjoyment of reading. In addition, reading selections and activities focus on high-interest topics that are meaningful and relevant to adolescent readers. Students are motivated by the opportunity to make their own choices of books, Software topics, and eReads. Further, the three stages of *READ 180 Next Generation* (A=Elementary; B=Middle School; C=High School) provide topics and content specifically geared toward the interests of students at different grade levels.

**Student Dashboard**
Aligning to Rigorous Standards

Becoming Critical Readers and Writers

At the heart of READ 180 Next Generation is rigorous literacy instruction that prepares students to be independent readers and thinkers. READ 180 Next Generation helps students develop the comprehension, writing, and critical thinking skills necessary to be proficient producers and consumers of information in a knowledge-based society. The program’s wide range of multileveled content-area texts and increasing levels of text complexity ensure that students of all reading abilities build the domain knowledge and comprehension skills needed to access advanced texts in college, the workplace, and beyond.

Communicating Effectively

Recognizing that communication skills are critical to success in a knowledge-based workplace and beyond, READ 180 Next Generation provides systematic support for the development of effective communication skills. Students have frequent opportunities to learn and practice the listening and speaking skills that are essential components of language and literacy development. READ 180 Next Generation also provides the purposeful, scaffolded instruction in academic language and vocabulary that struggling readers need, especially those with disabilities.
Reading Standards

According to rigorous new reading standards, students are expected to:

1) Read a range of challenging, high-quality informational, literary, and nonfiction text
2) Climb a “staircase” of increasingly more complex text to ramp them up to college and career readiness
3) Build reading comprehension through more rigorous text-based questioning and higher-order thinking skills with increasingly complex texts
4) Move toward reading independence over time

READ 180 Next Generation meets the criteria by accelerating readers toward independent comprehension of complex text. The program provides nonfiction texts that are highly motivating for struggling readers and paramount for college and career readiness. It provides a way to measure text complexity, and offers a range of quality texts with embedded text-based comprehension questions that build higher-order thinking skills to accelerate students to grade level. READ 180 Next Generation instruction scaffolds students to read increasingly complex text—initially with ample support, moving toward independence.

Foundational Literacy Skills

• An extensive body of research and expert opinion confirms the importance of explicit and systematic instruction in the foundational literacy skills of phonological awareness, phonics, decoding, word recognition, morphology and syntax, fluency, and spelling in helping students, especially those with disabilities, read—and that this skill instruction be combined with frequent engagement with level-appropriate text (Adams, 1990; National Early Literacy Panel, 2008). The value of the foundational literacy skills is evidenced by their inclusion in rigorous standards, such as the CCSS.

• Two of the most authoritative and comprehensive reading research summaries—the National Reading Panel report (NRP, 2000) and Preventing Reading Difficulties in Young Children (Committee on the Prevention of Reading Difficulties in Young Children, the Commission on Behavioral and Social Sciences and Education, and the National Research Council, 1998)—find convincing and substantial evidence that explicit instruction in phonemic awareness and phonemic decoding skills, fluency in word recognition and text processing, reading comprehension strategies, oral language vocabulary, spelling, and writing skills is consistently more effective than instruction that does not contain these components (Torgesen, 2002).

• Multisensory programs contain instruction in phonology and phonological awareness, sound-symbol associations, syllable instruction, morphology, syntax, and comprehension (McIntyre & Pickering, 1995). They include multisensory experiences that are incorporated into direct, systematic, sequential, and cumulative instruction that gives students practice with parsing language into small, manageable pieces. When woven together, this type of multisensory instruction allows for the fluency and automaticity of word recognition that is required for skilled reading (Birsch, 2011).

• Regular classroom instruction (Tier 1 in a RTI model) that reduces reading failure and enables text comprehension includes systematic instruction in phoneme awareness, phonics (with spelling), passage reading fluency, vocabulary, and comprehension—strands that ideally complement and support one another. Most importantly, students must spend time reading—not simply being read to—from text of the appropriate level of difficulty (Moats, 2012).
• A research synthesis on the efficacy of reading interventions on the reading comprehension outcomes of students with reading difficulties and disabilities in Grades 6 through 12 found that interventions that included multicomponent comprehension strategy instruction, fluency instruction, and word-level instruction were highly effective (Edmonds, Vaughn, Wexler, Reutebuch, Cable, & Tackett, 2009). In the interventions, word-level and comprehension instruction often incorporated spelling and writing as skills associated with successful reading (Wanzek et al., 2013; Wanzek, Vaughn, Wexler, Swanson, Edmonds, & Kim, 2006).

• A meta-analysis on reading intervention outcomes for struggling readers in Grades 4 to 12, including those with disabilities, found that interventions with word reading/spelling, fluency, vocabulary, comprehension, and multiple components were highly effective. The studies that included students with disabilities had higher effects than the studies with only struggling readers (Scammacca, Roberts, Vaughn, Edmonds, Wexler, Reutebuch, & Torgesen, 2007).

**READ 180 Next Generation Delivers**

Foundational literacy skills are explicitly and systematically taught throughout the Software and the rBook. Each workshop covers phonics and decoding skills, such as consonant digraphs and blends, long vowel teams and variant vowels, phonograms, and syllabication. Vocabulary and word study are covered with a focus on skills such as recognizing and using word families, compound words, context clues, synonyms and antonyms, affixes, roots, and idioms. Comprehension strategies are taught alongside these skills with all of the foundational literacy skills instruction taking place within meaningful literary experiences.

For students who are not able to decode, System 44® as a standalone program or integrated with READ 180 provides more intensive support through explicit, systematic phonemic awareness and phonics instruction that many students with reading difficulties need as a foundation for higher-level reading comprehension instruction. System 44 provides explicit phonics instruction through a scope and sequence that systematically integrates lessons on sounds and spellings with strategies for unlocking multisyllabic words. The program uses a metacognitive approach that helps older readers quickly “crack the code” of the English language, and both System 44 and READ 180 use a multisensory approach that gives students daily opportunities to view, listen, speak/record, and write about what they are learning by providing multiple means of representation, expression, and engagement.

A gradual release approach is used throughout the Software and the rBook. For example, each rBook Workshop includes three readings, each of which is longer and more challenging than the preceding one. Support and scaffolding is heavier in the beginning of each workshop so students benefit from gradually gaining the ability to independently learn and practice foundational literacy skills. Throughout READ 180 Next Generation, supports are used to scaffold the skills instruction. For example, whole- and small-group teacher-led lessons provide direct instruction, modeling, and guided practice in foundational literacy skills and strategies. A Reading Coach on the READ 180 Next Generation Audiobooks models fluency, comprehension, vocabulary, and self-monitoring strategies at important points during reading. Students thus experience at firsthand the strategies of a good reader throughout the supported reading of each grade- and age-appropriate book.
Reading Comprehension and Higher-Order Thinking Skills

- Research shows that poor readers and students with disabilities benefit from explicit comprehension strategy instruction (Gajria, Jitendra, Sood, & Sacks, 2007; Williams, Stafford, Lauer, Hall, & Pollini, 2009; Pressley, Roehrig, Bogner, Raphael, & Dolezal, 2002; Gersten, Fuchs, Williams, & Baker, 2001).

- Comprehension instruction should be coupled with scaffolded practice that helps students comprehend text and internalize new skills (Afflerbach, Pearson, & Paris, 2008). Effective comprehension strategy instruction helps move students to independent use of strategies by using a gradual release approach that first provides high support and gradually decreases the level of support to promote self-sufficiency (Biancarosa & Snow, 2006; Duke & Pearson, 2002; Nokes & Dole, 2004; Raphael, George, Weber, & Nies, 2008).

- Many academic texts are organized with a structure such as sequence of events, comparisons and contrasts, or causes and effects (Honig, Diamond, & Gutlohn, 2008). When reading for information, students need to know these specific text structures, or forms of organization, to extract meaning and develop understanding (Fisher & Frey, 2008; National Assessment Governing Board, 2006). Struggling readers often are not aware of these structures and lack appropriate skills to use them to support their comprehension. Explicitly teaching students to recognize text structures will help them organize information as they read, focus their attention on reading for understanding, and improve comprehension (Duke, 2010; Pearson, 2008).

- Teaching literary elements helps students recognize the underlying text structure and identify information that is relevant for understanding. This type of instruction can lead to improved comprehension and recall of text, particularly for struggling readers (Duke & Pearson, 2002).

- Research-supported practices for students with learning disabilities include instruction in story grammar for narrative texts (Gersten et al., 2001, citing 11 studies), and simultaneous use of multiple comprehension strategies for expository texts (Gersten et al., 2001, citing 16 studies).

- Comprehension occurs as a family of skills that develop simultaneously. In this family of skills are higher-order processes, such as inference generation and reasoning, that allow readers to recognize meaningful relationships among text elements and between text elements and background knowledge (Kendeou, van den Broek, White & Lynch, 2009; Cutting & Scarborough, 2006).

- Critical reading involves using higher-order thinking skills—such as analyzing, critiquing, and evaluating—to critique texts and draw connections with other texts, knowledge, and experiences (National Assessment Governing Board, 2008). Critical reading deepens comprehension and is an important characteristic of a successful reader (Carnegie Council on Advancing Adolescent Literacy, 2010; National Assessment Governing Board, 2008).

- To be well-prepared for college, the workplace, and life, students need opportunities to develop critical thinking skills, through instruction that requires them to critique a variety of texts, formulate and justify personal opinions, and discuss and evaluate different viewpoints (Carnegie Council on Advancing Adolescent Literacy, 2010; Lewis, 2007).

- Teachers can promote deeper levels of comprehension by moving students from literal thinking to critical thinking. Students who engage in regular activities that promote critical thinking perform better on higher-order thinking tasks (Law & Kaufhold, 2009).
READ 180 Next Generation Delivers

READ 180 Next Generation provides explicit, systematic instruction in well-known comprehension skills and strategies necessary for understanding text, such as main idea, sequence, and problem and solution, while also supporting the development of higher-order thinking skills. The Teacher’s Edition guides teachers in leading whole- and small-group lessons in which they teach, model, and guide practice in comprehension and higher-order thinking skills and strategies, using a wide range of expository and narrative texts. A gradual release approach is used throughout READ 180 Next Generation teacher-led instruction, Software, and the rBook to scaffold students in internalizing comprehension skills and strategies. For example, each rBook Workshop includes three readings, each of which is longer and more challenging than the preceding one.

READ 180 Next Generation instruction is designed to systematically bolster students’ comprehension of text before, during, and after reading, using research-based techniques that are beneficial to struggling readers and students with special needs. Before reading, anchor media and teacher-led lessons help students activate prior knowledge and build mental models of new concepts. During reading, the rBook and Software provide supports to help students comprehend the text—for example, by including prompts to check their understanding, or by allowing students to access the meaning of specific words as they read. READ 180 Next Generation Audiobooks include a Reading Coach who helps students independently apply their learning by explicitly modeling and explaining the use of comprehension strategies in context. Finally, READ 180 Next Generation instruction includes activities and routines to assess and reinforce comprehension after reading. For example, after every rBook reading, students gain scaffolded practice with identifying essential information in a text as they complete oral or written summaries of the readings. The Software supports comprehension by guiding students through a series of activities at the end of each topic to check understanding, and by offering students opportunities to write responses to the Software topics.

READ 180 Next Generation also challenges students to develop critical reading and higher-order thinking skills. For each Software topic, students can access web-based eReads that extend the topic with more rigorous, nonfiction content. As students read the eRead articles, there is read aloud support and pop up reading strategy support that guides them through higher-order thinking strategies. During rBook instruction, lessons in 21st Century literacies also promote higher-order thinking and critical-reading skills as students analyze multi-media texts and read about potential careers. At the end of each workshop, students engage in a Wrap-Up Project in which they actively apply higher-order thinking and 21st Century skills such as analyzing information, using technology for communication, and building an effective team.

rBook Workshop
Content-Area Reading With Informational Texts

• Understanding how other people live gives students insight into their own lives and helps them gain an appreciation of the diverse world around all of us. Learning from texts and various media that explore other cultures and perspectives can foster the global competence that is critical for students in today’s complex and interconnected society (Chen, 2010).

• To be college and career ready, students need to be proficient in reading complex informational texts independently in a variety of content areas, including history, social studies, science, and technical subjects (NGA, CCSSO, 2010).

• When students read informational texts, they build content knowledge and learn domain-specific words (Hirsch, 2006). Developing students’ domain knowledge with informational texts can help students be successful with content-area texts (Moss, 2005). Instruction in informational text can help students develop content knowledge, use their knowledge to support reading comprehension, and build authenticity into literacy instruction by reading real texts for real purposes (Cervetti, Jaynes, & Hiebert, 2009).

• Different academic disciplines are characterized by different sets of literacy practices. Students need opportunities to apply comprehension strategies with different types of texts (Alvermann, 2001; Biancarosa & Snow, 2006; Duke & Pearson, 2002), and to practice reading, writing, and talking about different content areas in order to learn those specific literacy practices and successfully comprehend and communicate across disciplines (Heller & Greenleaf, 2007).

• Content enhancements and cognitive strategies are effective teaching practices for students with disabilities. If the instructional goal is to facilitate the active processing of difficult content, then content enhancement might be an appropriate approach for students with disabilities. If the instructional goal includes how to learn from content, such as by generating main ideas, summarizing information, predicting, questioning, or clarifying text, then strategy instruction might be an appropriate approach (Gajria et al., 2007).

• Comprehension and learning new words comes easier when students read a text about a familiar subject (Hirsch, 2006). Poor readers have an easier time comprehending when asked to read passages on familiar subjects, even outperforming skilled readers who lack relevant background knowledge (Hirsch & Pondiscio, 2010).

• Research has demonstrated a dynamic relationship between prior knowledge and reading comprehension (Adams, 2009; Lee & Spratley, 2010). A strong base of content background knowledge enhances students’ reading comprehension (Alvermann, 2001; Hirsch, 2003; Pearson, Cervetti, & Tilson, 2008). In turn, effective comprehension strategies enable students to access a broader range of texts and build the content knowledge they need to comprehend even more advanced texts (Heller & Greenleaf, 2007; Lee & Spratley, 2010).

• World knowledge is particularly critical to understanding expository texts and assimilating the new information presented within those texts (Best, Floyd, & McNamara, 2008). Providing literacy instruction in the context of content-area texts also helps students build rich networks of academic vocabulary necessary for comprehending diverse texts (Pearson et al., 2008).
READ 180 Next Generation Delivers

READ 180 Next Generation offers multiple text types that build students’ world knowledge and prepare them to comprehend across the content areas. Because domain knowledge is critical to reading comprehension, READ 180 Next Generation includes informational texts related to social studies, science, social sciences, and contemporary social issues. In fact, 77% of readings across the rBook, eReads, Software, and Paperbacks are nonfiction. Through exposure to both informational and literary texts, READ 180 students gain experience with the different types of reading behaviors and skills associated with different types of texts.

The content in all components of READ 180 Next Generation reflects diverse perspectives, allowing students to both reflect on their own experiences and explore new concepts and points of view. In the Software, Paperbacks, Audiobooks, and eReads, students can choose among topics that engage them and reflect their interests, such as careers, music, heroes, relationships, health, and family. For example, the Your World and Beyond strand in the Software focuses on stories of young people in the United States and abroad who are addressing global challenges. Through this engaging, diverse content, READ 180 Next Generation readings help students develop the strong base of world knowledge and interdisciplinary literacy skills that they need in order to better comprehend texts across the curricula.

In order to help students access informational and literary texts in different subject areas, READ 180 Next Generation instruction employs a gradual release approach to move students toward independent mastery of text. Before reading, students view Anchor Videos to build knowledge around the topic of the passage. The rBook also provides direct, explicit, and systematic vocabulary instruction connected to the reading, including academic vocabulary from social studies and science content standards. During and after reading, careful scaffolding enables students of all reading levels to access content-rich, increasingly complex texts. As they gain mastery, students are challenged to increase independence in reading and comprehending a variety of texts; each Workshop includes a trajectory from highly supported readings in the rBook, Stretch texts, and Software passages, to more independent reading in the eReads, Audiobooks, and Paperbacks.

Informational Paperbacks and eReads
Levels of Text Complexity

• Reading is fundamental for meeting life goals, such as becoming informed, accomplishing tasks, pursuing interests, and raising children. Unless students learn how to read texts of real-world complexity, they will be unprepared for college, careers, and life in general. When students read complex texts, they gain new language and knowledge that they need in order to access ever more advanced texts (Adams, 2011, 2009).

• Because text complexity corresponds to the sophistication and intricacy of the information and ideas a text conveys, it also corresponds to how challenging the text is to read. Judging the complexity of a text involves analyzing its quantitative readability as well as qualitative considerations for a given reader and task (NGA, CCSSO, 2010; Hess & Biggam, 2004).

• A three-part model is recommended for measuring text complexity, consisting of three dimensions: 1) qualitative dimensions of text complexity; 2) quantitative dimensions of text complexity; and 3) reader and task considerations (CCSS, 2010).

• The Lexile Framework for Reading, a readability formula, is recommended as a quantitative measure of text complexity. The Lexile Framework for Reading, developed by MetaMetrics, Inc., uses word frequency and sentence length to produce a single measure called a Lexile (Lennon & Burdick, 2004). The cohesiveness of a text is also recommended as an additional feature beyond the Lexile. Increasing cohesion facilitates processing, and thus improves comprehension; however, the level of cohesion that is appropriate should be considered within the context of the reader and the text (Graesser, McNamara, Louwerse, & Cai, 2004).

• School texts increase significantly in complexity—in terms of words, structure, text features, and concepts—after the third grade (Carnegie Council on Advancing Adolescent Literacy, 2010). In a special education teaching situation, especially one meant to evaluate responsiveness to intervention, it is important to ensure a good match between reader and text. When students are matched with materials above their levels, it is difficult for them to make maximum progress (Adams, 2009; Hiebert, 2005; Shanahan, 2008).

• Research shows that all struggling readers, including students with special needs, benefit from highly scaffolded instruction and gradual releases of responsibility in comprehending challenging texts (Duke & Pearson, 2002; Fisher & Frey, 2008). Additionally, students with disabilities require time to read and respond to text with modeling and corrective feedback (Swanson, Wexler, & Vaughn, 2009; Vaughn & Roberts, 2007).
READ 180 Next Generation Delivers

READ 180 Next Generation instruction guides students from highly supported reading toward independent mastery of increasingly complex text, enabling students of all reading levels to access content-rich complex texts. Scholastic has created a version of the CCSS text complexity triangle. The Scholastic Text Complexity Triangle, shown in the figure below, measures three components of text complexity: Quantitative (Lexile), Qualitative, and Reader & Task.

READ 180 Next Generation texts are rated using a Qualitative Measure scoring rubric based on guidelines set by rigorous standards. All informational and literary texts have been assigned one of five complexity levels: Basic, Moderate 1, Moderate 2, Complex 1, or Complex 2. For a Quantitative Measure, READ 180 Next Generation uses the Lexile Framework to both determine student reading level and determine the difficulty of texts. All independent reading books and Software passages are assigned Lexile scores based on their levels of difficulty.

READ 180 Next Generation provides the teacher with the tools to expertly match Reader to Task. The variety of texts in READ 180 Next Generation provides varying degrees of complexity and scaffolding, allowing students to access texts at the appropriate level of challenge and move toward independence. The adaptive technology in READ 180 Next Generation customizes instruction and practice according to students’ Lexile levels providing continual opportunities for all students, including those with special needs, to experience success and demonstrate progress. Throughout READ 180 Next Generation, each reading is marked with an icon displaying its Lexile and complexity level to assist teachers in effectively matching readers with appropriately leveled texts.

Using the above dimensions, each rBook Workshop creates a “staircase” of increasing text complexity—a diverse array of classic and contemporary literature as well as challenging informational texts in a range of subjects. Each Workshop supports students in accessing complex texts through a narrow reading approach, in which students read a series of increasingly challenging texts with overlapping topics and recurring academic vocabulary. Each new text builds on the previous media and texts, providing students with the background knowledge, vocabulary, and confidence needed to access complex texts that might otherwise have been too challenging.
Writing Standards

According to rigorous new writing standards, students are expected to:

1) Write to make an argument and support it with evidence
2) Practice both shorter and extended research writing
3) Use technology in the service of reading, writing, and research
4) Write routinely in response to text

READ 180 Next Generation meets the criteria by ensuring students write every day and use textual evidence to develop their arguments. The Writing Zone and rBook cover numerous writing types, including Argument, Informational/Expository, Narrative, Literary Analysis, Informational Summary, Personal Narrative, and a Research Paper. READ 180 Next Generation technology prompts students to use academic vocabulary, and it provides immediate, corrective feedback.

Writing in the Service of Reading

• Struggling readers are even more struggling writers. Ongoing practice and explicit instruction in varied writing tasks are key to success for struggling students (Graham & Hebert, 2010).

• Without proper support, struggling writers often resort to writing down casual spoken English instead of formal academic English. Effective writing instruction begins with teacher modeling and explanation, followed by extensive scaffolded practice (Pressley, Mohan, Fingeret, Reffitt, & Raphael-Boraert, 2007).

• Reading and writing go hand in hand. By identifying and explicitly discussing the features of different texts, teachers can support students’ comprehension and offer models for writing (Schleppegrell, 2009).

• Writing instruction can have a positive impact on struggling students’ reading skills and comprehension, particularly when students analyze and interpret texts in writing, write summaries, and answer questions about them in writing (Graham & Hebert, 2010).

• Students’ writing development flourishes when it is scaffolded in various ways by supports that help students progress or carry out writing tasks and processes (Graham, Gillespie, & McKeown, 2012).

• Teachers can use writing instruction as a tool to promote content knowledge and as a mechanism for higher-order thinking. Research shows that writing can improve students’ comprehension of science, social studies, and language arts concepts when they write about texts they read in these content areas (Graham & Hebert, 2010).

• Expert opinion supports providing students with instruction and practice in writing for a variety of purposes, including to persuade, to explain, and to convey experience (ACT, 2007; Graham & Perin, 2007; NGA, CCSSO, 2010). Being able to write for these purposes is an important skill for success in college and beyond (ACT, 2009; Milewski, Johnson, Glazer, & Kubota, 2005).

• Students’ motivation to write increases when their peers are their audience. When adolescents work together to revise and edit, there is a strong impact on the quality of their writing (Perin, 2007; MacArthur, 2007).
• Research suggests that using technology as a tool for writing can be motivating and have a positive impact on the quality of what students write (Perin, 2007).

• Students are increasingly expected to be comfortable composing writing using word processing software in order to be successful in school, college, and the workplace (NGA, CCSSO, 2010).

**READ 180 Next Generation Delivers**

*READ 180* Next Generation recognizes the reciprocal relationship between writing and reading and provides the daily, rigorous writing instruction that is necessary for students to become proficient readers and writers. Students have multiple opportunities to write argument, informational, and narrative pieces. Throughout *READ 180* Next Generation, writing instruction emphasizes writing with a purpose and writing that develops content knowledge and reading skills.

*READ 180* Next Generation writing instruction provides carefully guided opportunities for students to engage in many different types of writing, from simple sentences to essays. The *rBook* includes frequent opportunities for students to write brief pieces (i.e., React & Write, Respond & Write, Summarize) to develop writing competence and confidence. *READ 180* Next Generation also includes writing tasks that span multiple days. Students begin with writing single paragraphs and move to longer essays, following the steps of the writing process: organizing ideas using graphic organizers; planning writing; composing a draft; and revising for clarity, conventions, and purpose. Writing is then shared through peer feedback and a variety of publishing opportunities. This systematically scaffolded writing process helps student explore and extend their knowledge through writing, and guides them in clearly conveying ideas using academic language.

Technology is also incorporated into *READ 180* Next Generation writing instruction. In the Writing Zone, students regularly complete Respond & Write activities in which they respond to a prompt and write using scaffolds. The writing students publish in the Writing Zone is independent practice that accompanies small-group writing instruction. As with the teacher-directed instruction, Writing Zone activities use a gradual release approach. In the Software, a thesaurus function helps students use academic language by suggesting alternative choices for “tired” words. In addition, all of the *rBook* writing tasks include ideas for students to use technology to publish their writing.
Speaking and Listening Standards

According to rigorous new speaking and listening standards, students are expected to:

1) Read complex text with fluency
2) Engage in academic discussions in various settings
3) Evaluate and present increasingly complex information with academic English

READ 180 Next Generation meets the criteria by providing supports for students to successfully present information and participate in academic discussions. Students practice fluent readings of texts and record the readings. They consistently participate in academic discussion routines using scaffolds that frontload vocabulary and concepts. Students receive explicit instruction in verbal summarization in order to synthesize information from multiple texts.

Oral Language Development

• Success in school, college, and the workplace depends on reading well. Learning to read well depends on rich language knowledge as well-developed listening and speaking skills are directly linked to reading and writing proficiency (August & Shanahan, 2006). Delays in oral language can result in reading comprehension difficulties; therefore, it is important to enrich oral language development in order to increase students’ ability to profit from education (Biemiller, 2003; Torgesen, 2006).

• Small-group or partnering activities that explicitly hold students accountable promote substantive oral language growth (Dutro & Kinsella, 2010). These activities include hand raising, round-robin discussions, and unstructured group work (Feldman & Denti, 2004).

• Struggling readers often remain passive, off-task, and disengaged; however, these learners may lack confidence about communicating their thoughts and require more thinking time and linguistic support to respond (Kinsella & Feldman, 2005). Structured partnering with coached language instruction and accountability for lesson tasks increases the amount of student talk in the classroom and provides support to increase fluency with academic discussion (Beck, McKeown, & Kucan, 2002; Dutro & Kinsella, 2010; National Institute for Literacy, 2007).

• Academic language refers to the form of the English language that is expected in situations such as the discussion of topics across the curriculum, making arguments, defending propositions, and synthesizing information. Written and spoken academic discussion is significantly different from information discussion as academic language is characterized by specific types of vocabulary, text structures, and grammatical structures (Dutro & Kinsella, 2010; Snow, 2010).

• Research supports using a contrastive approach to help students differentiate between informal and academic English, as well as to provide scaffolded direct instruction in the communication of the strategies and standards used in written and spoken academic English (Dutro & Kinsella, 2010; Kinsella & Feldman, 2005; Thompson, Craig, & Washington, 2004).
READ 180 Next Generation Delivers

READ 180 Next Generation provides a systematic approach to developing oral language skills and strategies. Recognizing that struggling readers need highly structured and teacher-mediated opportunities for academic discussion, READ 180 Next Generation instruction builds structured conversation into every lesson. These scaffolded speaking and listening tasks provide students with frames to help structure their responses and ensure that they use the target vocabulary and grammatical structure. Through these daily discussions, students develop facility with academic and conversational English, practice expressing their own ideas and responding to those of others, and build the communication skills necessary for effective collaboration.

During these daily conversations, teachers use structured engagement routines to provide a consistent format for discussion and help hold all students accountable for engaging in conversation with peers. For example, the Think (Write)-Pair-Share routine has students discussing their ideas with partners before sharing them with the class. Other routines ask students to provide physical responses—such as putting a thumb up, marking text, or pointing—during reading and discussion. These routines help ensure that all students are actively engaged, hold students accountable for participating in speaking and listening tasks, and provide the teacher with quick informal checks to see if all students are attending and understanding.

The RDI Book 3 provides additional resources for ELLs who need increased support with oral language. For example, RDI Book 3 includes lessons that support ELLs in three specific areas: listening and speaking; reading, writing, and conventions; and vocabulary acquisition and use. Each lesson includes three levels of differentiated instruction, so that teachers can assist learners who are at various levels of proficiency in the English language. Additional Professional Development resources are included to support implementation of Structured Engagement Routines that bolster oral language development.

The RDI Book 4, Assessment Strategies and Practice, provides resources for whole- and small-group instruction that build the habits of mind necessary for success on performance assessments.

Resources for Differentiated Instruction Books 1, 2, 3 and 4
Language Standards

According to rigorous new language standards, students are expected to:

1) Develop academic vocabulary to apply across disciplines
2) Read across varied contexts to explore word meaning
3) Study morphology, or the internal structure of words, to understand word relationships and word nuances
4) Demonstrate an understanding of the conventions and rules of standard English in reading, writing, speaking, and listening

READ 180 Next Generation meets the criteria by providing students the opportunities to master and apply high-leverage vocabulary across contexts. READ 180 Next Generation frontloads academic vocabulary and word families as students acquire vocabulary across diverse texts. Students are explicitly instructed in Greek and Latin roots, as well as English morphology, and they learn and apply grammar and mechanics rules.

Academic Vocabulary

- Research shows that there is a strong and apparently reciprocal relationship between reading comprehension and knowledge of both conversational and academic vocabulary (Baumann, Kame’enui, & Ash, 2003; Duke & Pearson, 2002; Gersten et al., 2001). Extensive exposure to words through speaking and reading can help build a wide range of oral and print vocabulary, which in turn aids reading comprehension (National Institute for Literacy, 2007).

- Students must expand their knowledge of word meanings, especially after the third grade, in order to construct meaning from what they read. Vocabulary plays an increasingly important role in supporting comprehension as students progress from elementary school to middle and high school (Schatzschneider, Buck, Torgesen, Wagner, Hassler, Hecht, & Powell-Smith, 2004; Torgesen et al., 2007).

- Struggling students in Grades 4 to 12 who demonstrate reading achievement below grade-level expectations require direct support for vocabulary and comprehension (Cirino, Romain, Barth, Tolar, Fletcher, & Vaughn, 2012; Torgesen et al., 2007). Direct, explicit instruction in high-leverage vocabulary and sentence structures has a positive impact on both immediate word learning and longer-term reading comprehension (Saunders & Goldenberg, 2010; Feldman & Kinsella, 2005).

- Effective vocabulary instruction includes: 1) direct instruction of individual words; 2) instruction in independent word learning strategies; and 3) wide reading of fiction and nonfiction texts. Direct instruction of vocabulary should focus on high-utility everyday words, academic vocabulary that is used across multiple domains, and specialized content-area terms relevant to the specific texts being read (National Institute for Literacy, 2007). Instruction in word learning strategies should include contextual and morphemic analysis as students learn and retain new words more easily when they can break them down into meaningful parts (Kieffer & Lesaux, 2007). Wide reading allows students to benefit from learning word meanings in context rather than as isolated lists of words (Au, 1993).

- Students gain exposure to new vocabulary through reading related texts with recursive vocabulary and engaging with the words over time. This is especially important for struggling readers. To add new academic words to their expressive vocabularies, students need structured classroom contexts that offer frequent and accountable opportunities to use the new terminology in their speaking and writing (Feldman & Kinsella, 2008).
• Learning academic vocabulary helps students participate in academic discussions, comprehend content-area texts, and meet academic writing demands. Explicitly teaching academic vocabulary yields the greatest return (Feldman & Kinsella, 2008).

**READ 180 Next Generation Delivers**

**READ 180** Next Generation provides a systematic approach to teaching students academic language and vocabulary. Through carefully scaffolded reading, writing, and speaking activities, students learn the phonological, morphological, syntactical, and semantic structures of English—particularly academic English. In the rBook, high-utility academic vocabulary is taught through a research-based instructional routine, promoting understanding of words that students will encounter in all subject areas. **READ 180** Next Generation also provides explicit and systematic instruction in word-learning strategies, giving students the tools they need to learn new words independently. Recursive vocabulary in rBook reading selections encourages frequent review, practice, and reinforcement of targeted words.

Independent reading materials in **READ 180** Next Generation provide further support for vocabulary acquisition. Through Audiobooks, leveled Paperbacks, and eReads, students are gradually exposed to increasingly advanced vocabulary. The Audiobooks include a Reading Coach who models vocabulary strategies using “think alouds.”

In the Software, students are introduced to context-relevant vocabulary words before each passage. Students then complete at least three reading practice activities using these words. As students practice, they receive definitions, context sentences, and decoding tips for each word—crucial supports that can help struggling students acquire vocabulary as they read. The Writing Zone includes a thesaurus feature that helps students use more varied and sophisticated vocabulary in their writing. **READ 180** Next Generation Software also includes vocabulary support features that can provide Spanish translations and cognates to further aid Spanish-speaking students.
Morphology and Grammar

• Phonological deficits observed in students with either dyslexia or language impairment can be related to deficits in morphological processing as evidenced by student errors on past-tense elicitation tasks involving regular verbs, irregular verbs, and nonwords (Robertson, Joanisse, Desroches, & Terry, 2012).

• The decoding of multisyllabic words poses difficulties beyond decoding of single-syllable words (Beck, 2006). Whereas skilled readers can syllabicate words to read them, struggling readers have difficulty syllabating (Bhattacharya & Ehri, 2004). Automatic recognition of syllables and morphemes can be improved with quick speed drills conducted as challenge games to achieve a goal (Moats, 2001).

• Several meta-analyses have shown the benefit of morphological instruction, especially for struggling students (Reed, 2008; Bowers, Kirby, & Deacon, 2010; Goodwin & Ahn, 2010; Carlisle, 2010) as cited by Bowers and Cooke (2012). Instruction in morphemic analysis helps students develop more advanced word recognition strategies. When students understand the meaning of component morphemes and are able to quickly pronounce them as parts of longer words, the speed and accuracy of their reading improves (Nagy, 2005).

• Studies of fourth- and fifth-grade students demonstrate the effectiveness of teaching students to break down words into meaningful parts and use prefixes, suffixes, and roots as clues to meaning (Kieffer & Lesaux, 2007; Baumann et al., 2003).

• Research shows that morphological awareness contributes to vocabulary growth. For every word known, a reader can apply morphology and context in order to understand as many as three more words (Nagy, Berninger, & Abbott, 2006).

• When students are provided with a writing scaffold that includes procedural facilitation, their use of grammar improves in that they are better able to correctly use punctuation, subdivide into paragraphs, and correctly use tenses (Re, Caeran, & Cornoldi, 2008).
READ 180 Next Generation Delivers

Throughout READ 180 Next Generation, grammar, usage, and mechanics are taught systematically and in context. Grammatical conventions are taught in the context of real writing to help students grasp grammatical concepts more quickly. The React & Write and the Summarize tasks in the rBook and the Respond & Write activity in the Software are frequent writing tasks that require students to use appropriate syntax, grammar, and vocabulary. READ 180 Next Generation then provides recursive grammar instruction that hones in on the errors that students most commonly make and gives corrective feedback. Conventions lessons in the rBook focus on common errors in the context of students’ writing and provide opportunities for students to revise their writing with focused editing tasks.

Students are explicitly instructed in Greek and Latin roots, as well as English morphology, throughout the rBook workshops and the Software. In word study lessons, students learn word and word parts from Greek and Latin that are the basis for English words. Students also learn to recognize and apply affixes, verb and noun endings, inflectional endings, contractions, and possessives to words to alter meaning, and they receive instruction in word families and compound words.

Rubrics, models, and assessments play an important role in helping students advance their use of grammar in their writing. Analyzing a model paper before writing helps make expectations transparent and aids struggling writers in visualizing the demands of the assignment. After writing, students use the Peer Feedback routine to read, score, and respond to a partner’s writing. Peer and teacher assessments are linked to materials for additional writing instruction and practice and are available electronically through the Scholastic Achievement Manager. These multiple opportunities for feedback provide the support that students—including students with special needs—need to gain confidence and independence with English grammar and writing for academic purposes.
As demonstrated in this paper, implementing Universal Design for Learning (UDL) principles through the innovative use of technology has always been one of the central components of READ 180’s proven instructional model. READ 180 Next Generation’s adaptive technology is ideal for personalizing learning for students with special needs because it adjusts to each student’s particular learning needs, breaks down tasks into steps, and provides immediate, individualized corrective feedback. Along the way, teachers are supplied with continuous data on students’ progress and areas of challenge. Within a Multi-Tiered System of Supports (MTSS) framework that includes Response to Intervention (RTI), READ 180 Next Generation Software can be used to meet individual needs at the appropriate level of instruction, without implementing separate or complex adaptations. As a result, students with special needs are not singled out or inconvenienced because of their disabilities. Throughout READ 180 Next Generation, technology is used as a tool to anchor instruction and build the background knowledge essential for comprehension.
Adaptive Technology

• Adaptive technology harnesses Universal Design for Learning (UDL) principles in that it provides a flexible design from the start that has customizable options. This flexibility allows all learners to progress from where they are and not where we would have imagined them to be. In this way, all learners are provided with instruction that is varied and robust enough to be effective (CAST, 2011).

• Research widely recognizes the power of adaptive technology to assist students with disabilities (Rose, Hasselbring, Stahl, & Zabala, 2005). For students with special needs, technology can be the difference between these students sitting in the classroom watching others participate or fully participating themselves (Bausch & Hasselbring, 2005). By giving students control of the screen and their progress, self-directed technology creates a sense of engagement and independence (Hasselbring et al., 2005).

• Instruction that takes advantage of the capabilities of adaptive technology raises student achievement, motivation, and engagement (Hasselbring & Goin, 2004). Studies have found that students frequently ask to use computer-assisted programs (Hitchcock & Noonan, 2000), and that students remain on task for longer periods when they are able to control the activities on the screen (Hitchcock & Noonan, 2000).

• Adaptive technology affords students the opportunity to receive individualized support, learn at their own pace, and receive corrective feedback in real time (Kamil, 2003). For students with special needs, individually targeted instruction in reading skills can improve reading achievement, both in the targeted skill and in more generalized measures of literacy (Shanahan, 2008; Vaughn & Denton, 2008).

• Digital learning materials are valuable for addressing individual learners’ needs because they can offer supportive features such as read-alouds, alternative texts to match different instructional levels, and strategy prompts and vocabulary links embedded within the text (Proctor, Dalton, & Grisham, 2007; Rose & Meyer, 2002).

• Computer-assisted instruction can build automaticity by providing students the opportunity to practice new skills systematically, with information presented in manageable sets (Hasselbring & Goin, 2004). Adaptive technology that utilizes an expanding recall model helps move new skill elements from working to long-term memory by systematically interspersing them with an increasing number of known elements and continually measuring response time. This model gradually increases the ratio of known to new skill elements, training students to be able to retrieve new elements with increasing automaticity (Medina, 2008).

• Assessment data is vital to an effective reading program as it ensures that students are on pace to reach mastery targets (Carnegie Corporation, 2004). Adaptive technology can effectively collect data and allow students and teachers to see reading and writing skills build incrementally. Struggling students are motivated by a personalized learning experience that allows them to view their data in a private setting, monitor their progress over time, and take ownership of their learning.
**READ 180 Next Generation Delivers**

*READ 180* Next Generation’s innovative technology harnesses Universal Design for Learning (UDL) theory and pedagogical principles to deliver individualized and personalized instruction tailored to each student’s needs and interests. The adaptive technology customizes and scaffolds individual skill practice and application in word recognition, vocabulary, spelling, comprehension, and fluency. Based on fundamental principles of working and long-term memory, the FASTT (Fluency and Automaticity through Systematic Teaching with Technology) algorithm in the *READ 180* Next Generation Software works to enhance the learning, storage, and retrieval of new material. The adaptive pacing of skills practice in the FASTT model efficiently helps students achieve automaticity. In addition, embedded assessments throughout the Software are designed to continuously assess and place students according to their level of mastery of learned and new information, and to customize corrective feedback to students’ specific errors.

The power of *READ 180* Next Generation’s adaptive technology is that it enables the program to assess student knowledge and skills, respond to individual student differences, differentiate and scaffold instruction, provide corrective feedback, and monitor student progress. It also helps teachers collect and manage data, thus freeing teachers to focus on targeted direct instruction for the whole class and small groups. For example, the adaptive *Scholastic Reading Inventory* (SRI) assessment screens students and provides a Lexile level which teachers can use to efficiently match students with texts. These characteristics constitute instructional practices that have been shown to be highly beneficial to struggling readers and students with special needs.

**Software Instructional Design**

![Diagram of the FASTT Model](image-url)

**Fluency and Automaticity through Systematic Teaching with Technology (FASTT) Model**
Immediate Corrective Feedback

• Successful interventions with secondary students with special needs provide immediate corrective feedback (Vaughn & Roberts, 2007).

• Immediate, computer-assisted corrective feedback accompanied by answer-until-correct procedures (Epstein, Cook, & Dihoff, 2005) or more practice (Hall, Hughes, & Filbert, 2000) have been found to be effective with special needs students.

• When feedback is specific and immediate, students spend valuable time practicing the correct word readings and spellings. Students are also more likely to accept and apply the immediate corrective feedback provided by Software than that given by teachers (Taylor et al., 2001).

• Immediate corrective feedback has been found to improve the motivation of mentally delayed adolescents (Hall, Hughes, & Filbert, 2000).

• Adaptive technology provides private, nonjudgmental assistance that can be especially important for struggling students (Dukes, 2005). Students are likely to become more confident and less embarrassed because they are learning at their own pace in a risk-free environment (Taylor, Hasselbring, & Williams, 2001).

READ 180 Next Generation Delivers

In the READ 180 Next Generation Software, the on-screen host provides immediate corrective feedback in all activities. The Software is designed so that the feedback is customized to correct students’ specific errors. For example, when students spell a word incorrectly on the Software, they receive immediate corrective feedback customized to that specific spelling mistake. The feedback is accompanied by modeling and guided practice. Students are first explicitly shown their errors, then they see a model of the correct spelling, and finally they practice the correct spelling. While providing feedback, the on-screen host provides patient encouragement in a way that is particularly beneficial to students with special needs. By having the Software provide the continuous corrective feedback and support, the teacher is freed to focus on instruction.
Background Knowledge Development Through Anchored Instruction

- People construct new knowledge and understandings based on their existing knowledge (Bransford et al., 2000). Research shows that background knowledge is critical to reading proficiency (Adams, 2009; Lee & Spratley, 2010; Torgesen et al., 2007). Knowledge of subject matter is necessary in order to understand what is read (Hirsch & Pondiscio, 2010). Direct instruction of vocabulary words helps to build background knowledge (Marzano, 2004).

- Some students face barriers to learning because the representation of information assumes certain critical background knowledge or relevant vocabulary. Since there is such a wide range of individual differences among students, ensuring that all students have equal opportunities to learn requires providing options and alternatives (CAST, 2011).

- In order to achieve comprehension, students need to be able to mentally visualize the text. Activating background knowledge helps students create images or mental models for improved comprehension (Williams, 2001).

- Visual and audio aids help learners imagine what scenes in a story might look like and how they change during the story, assisting them in constructing good mental models to enhance comprehension (Hasselbring, 2005).

- Dynamic images and sounds are especially helpful for students with learning disabilities and other students with limited background knowledge (Hasselbring & Glaser, 2000). Using multiple representations of video information with learning-disabled students gives them an authentic base of experience in abstract domains, thus making the abstract information more concrete (Heo, 2007).

- Research suggests that video-based anchored instruction has a positive impact on learning that is superior to that of alternative forms of instruction. Using videos as anchors can contextualize expository text and result in better comprehension of the text (Rose, Hasselbring, Stahl, & Zabala, 2005; Strangman, Hall, & Meyer, 2003).

READ 180 Next Generation Delivers

READ 180 Next Generation makes systematic and extensive use of mental models to help students build background knowledge and improve comprehension of texts. READ 180 Next Generation Software, eReads, and rBook workshops include engaging Anchor Videos that introduce students to the concepts and vocabulary they will need to access the related text passages. The videos aid students in developing a mental picture of what they are about to read, resulting in improved comprehension. The combination of video and vocabulary support is especially helpful for students with special needs who may have gaps in context information and/or academic language.

READ 180 Next Generation teacher-led instruction further supports the building of background knowledge to enhance comprehension. The rBook Teacher’s Edition includes specific instructional routines to prepare students for reading—for example, by asking student pairs to generate how, what, or why questions that they expect the text to answer. In addition, the RDI Book 3 includes lessons that teachers can use to build students’ background knowledge and promote mental model development during whole-group instruction.
Section 508 Compliance—Closed Captioning and Alternate Color Scheme

• Section 508 of the Vocational Rehabilitation Act governs technology access for individuals with disabilities. The law requires that all students have equivalent or alternative access to key educational objectives. When technology is 508 compliant, students with disabilities can better benefit from instruction in the general education setting (Hitchcock & Stahl, 2003).

• Research has demonstrated that captioned video and television programs can help deaf students improve their motivation, vocabulary, and reading comprehension (Jackson, 2003; Kalyanpur & Kirmani, 2005). It further deepens understanding of what is taught in the classroom (Hasselbring & Glaser, 2000).

• When using a computer program that provides captioning, among other technology supports, older students who are deaf and hard of hearing made substantial gains in recognition and understanding of tested vocabulary (Loeterman, Paul, & Donahue, 2002).

• Adjusting the font, size, and color of the text can help address the needs of students with visual impairment (Hasselbring & Glaser, 2000).

READ 180 Next Generation Delivers

READ 180 Next Generation addresses all 12 Section 508 accessibility requirements through direct program accessibility features in the Software and through compatibility with third party assistive devices and alternative input devices. READ 180 Next Generation was developed with the intent to give students with visual, hearing and/or physical disabilities access to the same mainstream learning materials that nonimpaired students use.

Captioning can be activated in the READ 180 Next Generation Software Anchor Videos so that students may read the narration of the videos and the host’s feedback. The button rollover feature provides a text label as well as an audio prompt for the Software buttons in READ 180 Next Generation. The label appears when the student moves the cursor over the button. In addition, teachers may change the text screen from dark text on a light background to light text on a dark background for students with vision impairment.
Efficient Screening, Placement, and Progress Monitoring Assessments

• Data from assessments of adolescents with possible learning disabilities should provide a clear profile of students’ strengths, weaknesses, and literacy needs, and should result in prescriptions for specific targeted instruction (National Joint Committee on Learning Disabilities, 2008; Vaughn & Denton, 2008).

• Ongoing assessment and progress monitoring are vital to documenting student growth and informing instruction (Fisher & Ivey, 2006; National Joint Committee on Learning Disabilities, 2008; Stecker, Fuchs, L. S., & Fuchs, D., 2005; Torgesen, 2002) and is of particular importance with special needs students (National Joint Committee on Learning Disabilities, 2008; Vaughn & Denton, 2008).

• Data collected through a comprehensive assessment system should be used to: 1) track student growth; 2) identify students who need more intensive intervention; and 3) assess the efficacy and implementation quality of instructional programs (National Center on Response to Intervention, 2010).

• Close progress monitoring, such as RTI requires, can potentially result in fewer students incorrectly identified as having learning disabilities when they may be struggling due to other reasons (Cortiella, 2005; Duffy, 2008).

• Technology is an important tool for assessment. For teachers, technology can minimize loss of instructional time by providing an efficient method of collecting and analyzing student data (Bransford et al., 2000). For students, technology offers an engaging and personalized assessment experience (Hasselbring et al., 2005).

• Within the Universal Design for Learning (UDL) framework, a goal is improving the accuracy and timeliness of assessments, as well as ensuring that they are comprehensive and articulate enough to guide instruction for all learners. By increasing the ways that learner variability can be accommodated, UDL assessments reduce or remove barriers to accurate measurement of learner knowledge, skills, and engagement (CAST, 2011).

• Technology-based assessments in subjects like writing reflect the expectation in today’s schools and workplace that students will be able to compose and edit on a computer (NGA, CCSSO, 2010).

• Performance-based assessments, in which students apply knowledge to real-world tasks, are a useful method for assessing students’ application of critical thinking and 21st Century skills such as analysis, evaluation, problem solving, and collaboration (Edutopia, 2008).
READ 180 Next Generation Delivers

The READ 180 Next Generation assessment system provides ongoing information for students, teachers, and administrators throughout the year about student learning and progress. READ 180 Next Generation assessments include tools to screen and place students, monitor progress, and provide information that can be used to inform instruction and assess the quality of program implementation. By utilizing Universal Design for Learning (UDL) principles, READ 180 assessments provide immediate and more accurate measures of student learning in varied ways throughout the school year.

READ 180 Next Generation teachers use SRI, a scientifically based and validated test, as a screening assessment in the beginning of the year and as a progress-monitoring measure in the middle and end of the year. SRI uses reading passages and accompanying questions to determine a student’s Lexile measure or reading level. SRI results are used to match students to appropriate text and place them at the correct level in the technology.

In addition to SRI, READ 180 Next Generation includes multiple formal and informal assessments to monitor student progress on an ongoing basis. Students take rSkills tests at the end of each Workshop to assess skills from rBook instruction, and they take rSkills Summative Tests at midyear and end of year to assess listening and reading comprehension, critical reading, word-study skills, conventions, and writing. Scholastic Reading Counts! quizzes assess students’ comprehension of Paperbacks, Audiobooks, and eReads that they complete during Modeled and Independent Reading. Three Checkpoints in each rBook Workshop guide teachers in pausing to assess student learning, and reviewing and reteaching skills as necessary based on data from the

Critical thinking and 21st Century skills are assessed using Wrap-Up Tests at the end of every workshop, and Wrap-Up Projects assess students’ abilities to apply skills such as analyzing information, using technology for communication, and engaging in collaborative work. Scoring guides are used to assess these projects, as well as rBook writing assignments and the Respond & Write activities in the Writing Zone. These scoring guides support students and teachers in reviewing students’ work, providing feedback, and revising as necessary.

Technology plays an important role in the READ 180 Next Generation assessment system. READ 180 Next Generation’s adaptive technology provides students with corrective feedback and teachers with a powerful tool for progress monitoring as it continuously collects data on students’ growth and mastery of new skills. The Teacher and Leadership Dashboards provide easy access to data from these ongoing assessments, allowing teachers and administrators to efficiently monitor student progress in real time, quickly identify problems, and inform decision making about instruction. The Scholastic Achievement Manager (SAM) Student Digital Portfolio compiles student work and includes rubrics for teachers to score fluency recordings, writing prompts, and open-response items from the rSkills tests and Writing Zone. Formal assessments—including the SRI, rSkills tests, Scholastic and Reading Counts! quizzes—are technology based.
Summary

As this paper shows, READ 180 Next Generation offers students with special needs an intensive literacy intervention program deeply grounded in research and best practices. Direct, systematic instruction in reading and writing is combined with instruction that develops critical thinking and oral language skills, preparing students to be reflective, independent, and effective readers and thinkers, and thus productive citizens of a knowledge-based society. Utilizing proven principles of cognition and learning, adaptive technology, individualized instruction, and high-interest materials, READ 180 Next Generation content is engaging and accessible to students and provides the scaffolded practice that they need. In addition, READ 180 Next Generation offers motivational support that improves student confidence and attitudes toward reading and school. Taken together, READ 180 Next Generation provides effective interventions that help students with a multitude of learning abilities and challenges achieve accelerated results in order to enjoy academic success.
References


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