Reading Comprehension Instruction for Middle and High School Students in English Language Arts: Research and Evidence-Based Practices

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Abstract Whether driven by individual state or national efforts, the desire by key stakeholder groups to make American students internationally competitive brings a renewed focus on reading comprehension instruction in middle and high schools. Such efforts push reading comprehension instruction beyond understanding text and the author's message to critical or "close" reading that integrates text-based information with the reader's prior knowledge resulting in new and expanded understanding of complex ideas. In order to ensure that students become proficient in the type of higher order comprehension expected by more rigorous standards, teachers need to be effective in teaching high impact reading comprehension strategies. In this chapter, we briefly highlight new expectations for English language arts at the middle and high school levels, review reading programs shown to be effective in rigorous research studies that measure reading comprehension or reading achievement outcomes with middle and high school students in core English language arts courses. Finally, we discuss specific reading strategies and vocabulary instruction that support close reading and suggest a model for teaching reading comprehension in middle and high schools.

Keywords Close reading • Adolescents • Language arts • Reading strategies

1 Introduction

For states that adopt either the Common Core State Standards (CCSS) or rigorous independent standards, a significant shift will be required in English language arts (ELA) instruction (Rothman, 2013). This shift will be required because of the standards' emphasis on college and career readiness. Such an emphasis will require

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that middle and high school teachers provide reading comprehension instruction that is vastly improved and far more rigorous than current instruction (National Governors Association Center for Best Practices [NGAC] & Council of Chief State School Officers [CCSSO], 2010).

2 Reading Comprehension Defined

For the purpose of this chapter, we define reading comprehension as a process in which the reader constructs meaning from text-based information. During this process, the reader creates a mental representation of the meaning of the text by using features of the text and the reader's knowledge of the world. When the reader integrates text-based knowledge with prior knowledge, deep comprehension occurs (Duke & Carlisle, 2011; Kintsch, 1998; Snow, 2002). Thus, reading comprehension is not limited to knowledge of textual information, but comprehension becomes the complex interaction of text, reader, and contextual factors (Duke & Carlisle, 2011; Duke, Pearson, Strachan, & Billman, 2011; Snow, 2002). Teaching students to be effective comprehenders of text who engage in the process described above will require a significant shift in how reading comprehension is taught in ELA classes.

In addition to changing the way reading comprehension is taught, changes will be required in curriculum materials, instructional strategies, assessments, instructional support systems, professional learning, and instructional coaching. For example, teachers will need to engineer instruction so that whole class, small group, cooperative learning groups, and individual support and feedback opportunities are available to students in order to personalize learning (Rothman, 2013; Snow & O'Connor, 2013). Teachers will need to identify research-based reading strategies that engage students in comprehension activities (Shanahan, 2013). More importantly, teachers will need to be prepared to explicitly teach the strategies to a diverse student population. Instruction will need to be explicit in order to meet the needs of students with disabilities, those living in poverty, and those whose first language is other than English (Allington, 2011; Archer & Hughes, 2011). In addition, schools may need to provide supplemental reading instruction through a framework of multi-tiered system of supports (MTSS). An MTSS framework will support students who are not yet proficient readers and those who have had insufficient response to reading comprehension instruction in the past (Lane, Oakes, Menzies, & Harris, 2013). Finally, all innovations must be anchored in quality professional learning if some level of implementation fidelity is expected.

Instructional coaches will play a critical role in the professional learning process (Knight, 2004). Instructional coaches are most often school-based personnel, usually experienced and highly effective teachers on special assignment, who act as on-site professional developers. The coaches support teachers as they implement proven innovations and/or programs. Instructional coaches use effective practices for adults to collaborate, identify practices that address teachers' needs, and coach

teachers through implementation of those practices. Often coaches will support and encourage teachers by helping teachers analyze the classroom environment and identify ways to address pressing concerns. In short, instructional coaches, working in partnership with teachers, identify goals, guide teachers through new instructional material, engage in collaborative planning, model new instructional practices in teachers' classrooms; and provide feedback to teachers (Knight, 2004).

In this chapter, we will discuss ways to include effective comprehension strategies in ELA instruction. Additionally, we will explore evidence-based practices and structures that support effective implementation and are aligned with the changing expectations for ELA middle and high school reading comprehension instruction.

3 The Continuing Challenge

Overall, the findings reported in the 2013 National Assessment of Educational Progress (NAEP) relative to reading outcomes for fourth and eighth grade students are modestly encouraging. For example, scores for eighth grade readers improved slightly. That is, scores increased from 265 points in 2011 to 268 points in 2013, a statistically significant difference. Fourth grade reading scores were relatively stable with a slight but not statistically significant change (National Center for Educational Statistics [NCES], 2013). In stark contrast, however, some subgroups of learners showed little or no improvement. The data for eighth grade students with disabilities show that these students continue to do poorly. Fully 63 % of students with disabilities read below the Basic Level on the NAEP reading assessment compared to 22 % of their peers without disabilities (National Center for Educational Statistics, 2012). Additionally, both African American and Latino 17-year-olds score 26 points below White students the same age (NCES, 2013). In a very real sense, students reading at the Basic or Below Basic Levels are currently unable to comprehend much of the written material they encounter in language arts classes.

The challenge is not solely related to subgroups of students within the U.S.. On an international measure of math, science, and reading literacy, U.S. students continue to be "average" when compared to 65 international education systems. Specifically, the Program for International Student Assessment (PISA; Buckley, 2013) shows no measurable change in scores for U.S. 15-year-olds in reading literacy. And *only 8 %* of 15-year-olds in the U.S. scored at the higher reading levels of the PISA (Buckley, 2013). The higher levels of reading comprehension are somewhat aligned to new measures of reading comprehension and standards found in the CCSS. Thus, English language arts teachers will, in all likelihood, encounter wide academic diversity in their classes and students with poor basic reading skills.

Although data on the reading performance of adolescent readers is helpful in general, it does not describe the nature of the specific reading challenges many students face in terms of reading comprehension and the skills that support

comprehension. To add clarity to the reading skill profile of adolescent readers and thus better inform teachers about the instructional needs of adolescent readers, Hock et al. (2009) conducted a descriptive study of adolescent readers in which multiple reading measures were administered to a stratified sample of exemplary, above average, average, below average, and unsatisfactory adolescent readers. Students were placed in the appropriate category based on their reading scores on the Kansas Reading Assessment (Kansas State Department of Education, 2005). Students were then administered 11 standardized reading tests across five reading domains: alphabetics, word level reading, fluency, vocabulary, and comprehension (Hock et al., 2009).

The study described differences across reading domains between proficient and adolescent struggling readers (ASRs). In all five reading domains, struggling readers were found to score statistically lower than their proficient reader counterparts. By and large, the struggling readers scored approximately one standard deviation below the mean in each reading domain and 20 or more standard score points lower than the proficient reader group. Although the areas of greatest deficit were in fluency and comprehension, many poor readers also demonstrated significant deficits with word level reading (word attack, decoding, word recognition, and rate). Specifically, the study found that 61 % of the struggling reader group scored low in all five domains. An additional 12 % scored low on all domains except word level. Thus, 73 % of the students had comprehension difficulties. These findings underscore the notion that improving reading proficiency is not a challenge to be taken lightly. We strongly believe that ELA teachers will need support to improve reading comprehension outcomes for all students. Such support will require instruction that is effective, supplemental, and aligned with the major reading domains.

Adolescent struggling readers are not a homogenous group. In a latent class analysis of the same struggling reader data set discussed above, researchers found five statistically unique subgroups of ASRs: readers with severe global weaknesses, readers with moderate global weaknesses, dysfluent readers, weak language comprehenders, and weak reading comprehenders (Brasseur-Hock et al., 2011). The profiles of these five subgroups demonstrate considerable diversity and are distinguished by their specific strengths and weaknesses. Two of the subgroups were similar with respect to component reading scores though dissimilar with respect to severity of the deficits: those with what were termed *severe global weaknesses* and those with *moderate global weaknesses*. These two groups scored from one to two standard deviations below the mean on almost all reading measures. *Dysfluent readers* showed weaknesses only on the measure of fluency. *Weak language comprehenders* were distinguished by average to above average performance on all component skills except comprehension, which was a half of a standard deviation below norms. Finally, *weak reading comprehenders* demonstrated strengths, performing at or above average on all components skills, but were still poor comprehenders. The weak reading comprehenders may lack skills that weren't assessed or have potential difficulties with strategic processing of extended text. They may also lack experience with particular genres of texts or have limited background knowledge necessary for comprehension.

Given the significant reading needs of adolescent struggling readers and the diversity of subgroups of poor comprehenders, increasing students' reading proficiency to the level required by more rigorous standards will be a significant challenge for teachers whose students lack basic reading skills. Again, we believe whole school efforts are required to improve reading proficiency for all adolescents, such as that offered in an MTSS framework (Lane et al., 2013), and instructional practices and strategies for teaching adolescents to be proficient readers in ELA classes.

4 Beyond the Comprehension Challenge: The Opportunity Gap

Low levels of reading achievement are related to poor school and life opportunity outcomes. For example, about 20 % of the lowest level readers will drop out of high school by the end of their sophomore year (Dalton, Glennie, Ingels, & Wirt, 2009). The consequences of not graduating have been well documented; dropouts have higher unemployment rates and earn lower wages (Lehr, Johnson, Bremer, Cosio, & Thompson, 2004). Thus, although reading proficiency matters in terms of school and life outcomes, many middle and high school students, including English language learners, African American and Hispanic students, students living in poverty, and students with disabilities, have a history of significantly limited educational success and overall life opportunities due, in part, to poor reading skills (Carnegie Council on Advancing Adolescent Literacy, 2010; Lichtenstein & Blackorby, 1995).

5 The Impact of the More Rigorous Learning Standards

In response to increasing the U.S.'s ability to compete internationally, states have worked to increase the rigor of educational standards. In turn, these rigorous standards are expected to significantly increase the U.S.'s academic competitiveness and to better prepare students for the growing knowledge-based global economy. Although the new standards may be theoretically sound, initial results from states that have administered reading measures more closely aligned with rigorous standards indicate that student performance will be well below desired outcomes. For example, student reading test scores in New York dropped about 35 % from the previous year's scores, and only 26 % of students in the third through eighth grade passed the test in English (Editorial Board New York Times, 2013). Similar findings can be found in other states (e.g., Kansas, Kentucky, and North Carolina). Given that many students scored below proficient on previous state tests and are now scoring even lower on more rigorous measures, it seems likely that many ELA teachers will need to alter their instructional practices and curriculum in order to respond to this new reality.

5.1 What We Know About Effective Reading Programs

Although limited in number, evidenced-based programs shown to significantly improve reading comprehension outcomes for middle and high school students do exist (e.g., http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2013456). In this chapter, we review *only* those reading programs shown to be effective in rigorous research studies and reviewed by the What Works Clearinghouse (WWC). Further, we review only those programs that measure reading comprehension or reading achievement outcomes with middle and high school students in core English language arts (ELA) courses. That is, the programs must have been delivered in ELA classrooms and not in supplemental or special courses. Information on instruction for English Language learners and students with disabilities and often provided in supplemental instruction settings are reviewed in Chapters "Reading Comprehension Skill Development and Instruction for Adolescent English Language Learners: A Focus on Academic Vocabulary Instruction" and "Special Education in Middle and High School" of this book. Because the majority of these students are served in general education language arts classes, ELA teachers will find that information helpful.

6 What Works Clearinghouse

The Institute for Education Sciences (IES) established the What Works Clearinghouse (WWC) to help educators determine the level and quality of evidence supporting interventions, practices, and programs. The stated goal of the WWC is to provide educators with the information they need to make evidence-based decisions. They do this through a systematic review process which applies rigorous research standards to identify high-quality research and summarize the findings. The WWC gathers studies through a comprehensive search of published and unpublished publicly available research literature. They also search relevant electronic databases and websites. Studies are screened for eligibility, and then each study is reviewed to determine if evidence standards have been met. Each study receives a study rating of: *Meets Evidence Standards without Reservations*, *Meets Evidence Standards with Reservations*, or *Does Not Meet Evidence Standards*, that relates to the amount of confidence WWC places in the ability of the study to demonstrate causal evidence of the effectiveness of an intervention. The WWC combines findings from individual studies into summary measures of effectiveness, including those describing the magnitude of findings, the amount of supporting evidence, and the ability to generalize findings. The WWC trains and certifies its reviewers to ensure that all reviews are accurate representations of whether studies meet WWC evidence standards. Additional information on the WWC and in-depth information on all studies reviewed can be found at http://ies.ed.gov/ncee/wwc/.

7 Evidenced-Based Reading Programs

First, we review **Project CRISS®**. The WWC found Project CRISS® to have potentially positive effects on reading comprehension for general education students in grades 4 through 6 (U.S. Department of Education, Institute of Education Sciences, 2010a, 2010b, 2010c). Given that some middle schools include students in grades 5 and 6, we believe this program to be appropriate for the chapter. Project CRISS is a professional development program for teachers of students in grades 3 through 12 and uses existing curricular materials to teach reading, writing, and learning in whole class settings. The main thrust of the program is to support teachers as they change instructional practices, not necessarily curricula. Teachers learn how to: teach their students comprehension monitoring strategies; integrate new knowledge with prior knowledge; and implement strategies for active engagement in learning activities by discussion, organization, and analysis of text structure. Teachers also learn how to support student application of these skills and strategies as they learn content.

Results of two randomized control trials (RCTs) that met WWC evidence standards are included in the WWC report on Project CRISS. One study (Horsfall & Santa, 1994) reported significantly greater gains on a developer-made measure of free recall of information for students in grades 4 (ES = 1.17) and 6 (ES = 0.96). These are very large effects obtained on developer-made measures that were closely aligned with the intervention. However, in another RCT study (James-Burdumy et al., 2009) no statistically significant effects for Project CRISS were found over a control condition using a standardized reading measure (The Group Reading And Diagnostic Evaluation; Williams, 2001) and measures of science and social studies reading comprehension. The WWC concluded that the evidence supporting Project CRISS, while mixed, was potentially positive.

Cooperative Integrated Reading and Comprehension® (CIRC; Stevens & Slavin, 1995) is a reading and writing program for students in grades 2 through 6. The key components of the program include story related activities, direct instruction for reading comprehension, and integrated language arts/writing instruction. Within the general education classrooms, students work in cooperative pairs or small groups of four reading to each other; using strategies for prediction and summarization; writing responses to questions; and practicing skills for spelling, decoding, and vocabulary. The CIRC is part of the *Success for All* school reform model and focuses on reading and writing skills. A Spanish version of the program is also available. Currently, CIRC has evolved into two reading programs: Reading Roots (beginning readers) and Reading Wings (upper elementary).

Based on two studies that meet the WWC evidence standards with reservations, the CIRC was found to have potentially positive effects on reading comprehension and general literacy achievement for younger adolescents (U.S. Department of Education, Institute of Education Sciences, 2010a, 2010b, 2010c). One of the studies (Stevens & Slavin, 1995) was conducted, in part, in grade 6 as an element of the language arts curriculum. This quasi-experimental design study found the overall

impact of the program to have an Improvement Index of 7 percentile points for the average student. In this case, percentile scores represent the number of scores below the reported percentile score. Thus, if the average score for the comparison group was, for example, at the 57th percentile, the CIRC group scored at the 64th percentile or 7 percentile points higher.

The researchers used standardized measures of reading comprehension and vocabulary. Another quasi-experimental study was conducted by Jewell (1994) in grades 2 through 6. Although there are potential confounds in this study (e.g., volunteer teachers in the experimental condition, non-volunteer teachers in the comparison) the results were promising if not limited. The impact of the CIRC program was 2 percentile points above the mean, which the WWC (2010) determined to be small with indeterminate effects.[1]

The Talent Development Middle Grades Program is a comprehensive school reform model designed to improve learning outcomes for students in urban middle schools (Herlihy & Kemple, 2004). Key features of the model include small learning communities, the use of an evidenced-based curriculum aligned with standards, teacher teams, and school-family-community connections. A key component of the model is a reading program called Student Team Reading. This program is a reading and language arts curriculum for middle school students that utilizes cooperative learning, high interest reading material, and explicit instruction to teach reading comprehension strategies, fluency in reading, and writing. The instructional model involves teacher explanation, team and independent practice, and peer and individual assessments.

One study met the WWC criteria for evidenced-based standards with reservations. The study was conducted with seventh and eighth grade middle school students in 29 urban schools (Herlihy & Kemple, 2004). The Student Team Reading Program was found to have potentially positive effects on reading comprehension for adolescents. The impact of those effects were determined to be an average of 3 percentile points above the average score for students in the study. The U.S. Department of Education, Institute of Education Sciences (2013) determined the effectiveness of The Talent Development Middle Grades Program to have potentially positive effects on comprehension for adolescent readers.

Reading Apprenticeship® is an instructional approach designed to improve engagement, fluency, and comprehension of content area materials. Reading Apprenticeship is intended for students in middle schools, high schools, and community colleges. In the program, the teacher assumes the role of expert reader who models and guides students through text-based problem solving activities. The course is embedded within content area classes (Corrin et al., 2008).

One study meets the WWC standard for evidence without reservations (Corrin et al., 2008). In this RCT study involving over 2,000 students in 10 school districts, students in the Reading Apprenticeship condition scored a statistically significant positive effect on the reading comprehension subtest of the Group Reading And

[1]The WWC does not report effect sizes that are less than 0.25.

Diagnostic Evaluation (Williams, 2001). There were no significant differences on subtests for vocabulary or overall test performance. The U.S. Department of Education, Institute of Education Sciences (2010a, 2010b, 2010c) found *Reading Apprenticeship*® to have potentially positive effects on comprehension for adolescent learners.

Read 180 is a widely used supplementary reading program designed for students in elementary through high school. Although Read 180 is not usually taught in ELA classes, it could provide more intensive reading instruction if needed. Read 180 is one example of how a school could utilize an MTSS framework for adolescent struggling readers.

Read 180 incorporates a computer program for reading practice, a high interest literature component, and direct instruction in reading skills. Students engage in whole group direct instruction, small group rotations, and whole group wrap-up sessions for 90 minutes each day. The program has a software component that can track student progress and provide progress monitoring data on each student and whole classes. The software component is adaptive as it tracks and adjusts the difficulty level of the material students read. Read 180 also includes an extensive classroom library of high interest books for independent reading. Audiobooks are also available and can provide modeled reading.

Seven studies met the WWC standards for effectiveness with reservations. The studies included over 10,000 students across seven states and with students in grades 4 to 9. The results across the seven studies were mixed, and the U.S. Department of Education, Institute of Education Sciences (2009) concluded that Read 180 had potentially positive effects in comprehension and general literacy achievement for adolescent learners.

Fuchs, Fuchs, Mathes, and Simmons (1997) examined the effects of **Peer-Assisted Learning Strategies** (PALS) students in grades two through six at 12 elementary and middle schools. Random assignment of 12 schools to the intervention or control condition was conducted for the study. These 12 schools were equally divided between the *Peer-Assisted Learning Strategies* and control conditions and among high-, middle-, and low-level achievement school designations. After schools were randomly assigned, teachers identified three students to participate in the study: a low achiever with a learning disability, a low achiever without a disability, and an average achiever. The resulting study sample included 60 students who received *Peer-Assisted Learning Strategies* and 60 comparison students who received regular reading instruction. The study reported student outcomes after 15 weeks of program implementation.

For the full sample of students in the study, researchers found a statistically significant positive effect of *Peer-Assisted Learning Strategies* on the questions correct measure of the Comprehension Reading Assessment Battery (CRAB) (Fuchs et al., 1997). According to WWC calculations, the effect was not statistically significant (when adjusted for clustering), but it was large enough to be considered substantively important (i.e., an effect size of at least 0.25). This results in a rating of potentially positive effects, with a small extent of evidence (U.S. Department of Education, Institute of Education Sciences, 2012).

Taken together, the six programs described above represent the current body of evidence-based practices that have been rigorously evaluated by a third party clearinghouse. Findings from research on the programs highlight several common instructional practices across the five models: (a) explicit instruction is the instructional model of choice–all studies reviewed included some variation of explicit instruction to teach students skills, strategies, or specific knowledge; (b) students are taught strategies for reading comprehension; (c) instructional approaches include cooperative learning activities; and (d) reading comprehension instruction may be embedded within the existing core curriculum.

Although all of the programs have demonstrated statistically significant positive gains on some measures of reading comprehension for students in the intervention condition of studies, the impact of the interventions on reading outcomes was somewhat limited and mixed. For example, in a Project CRISS RCT study (Horsfall & Santa, 1994), statistically significant gains on a developer-made measure were reported. In another Project CRISS RCT study (James-Burdumy et al., 2009), researchers found no statistically significant effects using a standardized reading measure. Further, in the Reading Apprenticeship study, statistically significant results were reported. However, the effect size was small (0.19), and most students were still reading two or more years below grade level after treatment (Corrin et al., 2008; Herlihy & Kemple, 2004). In other words, the reading comprehension achievement gap was not significantly narrowed to the extent that students could independently navigate the text-based demands of their core classes. Thus, although these interventions have been shown to have potentially positive effects on adolescent learners, more research and development seems warranted.

8 Research-Based Instructional Practices

In addition to the evidence-based programs described earlier, English language arts teachers can take some comfort in the evidence supporting *instructional practices* that can be implemented within existing curricula. In a review of more than 800 meta-analyses of general instructional practices, Hattie (2009) identified high impact instructional practices, some of which can be incorporated into middle and high school ELA classrooms: (a) teachers are among the most effective influences in learning; (b) teachers need to be directive, caring, influential, actively engaged in learning, and passionate about their work; (c) assessment that informs instruction and knowledge about what each students knows is critical; (d) teachers need to know about learning intentions, success criteria, and student progress toward intended outcomes; (e) teachers need to know how to teach students to construct knowledge; and (f) staff need to create schools and classrooms where learning and risk are welcome. The key finding, according to Hattie, was that gains in student learning were dependent upon teachers and their instructional practices. In 2004,

Nye, Konstantopoulos, and Hedges found that teacher effects are larger than school effects, thereby further supporting the notion that teachers play a critical role in student outcomes.

Hattie (2009, 2012) describes specific instructional practices that are highly effective. He defines highly effective as practices that have an effect size of 0.40 or higher. Many of these practices are not tied to a specific program or intervention but can be incorporated into core classes and existing curricula. These practices include: (a) having students regularly record progress and self-report grades (ES = 1.44); (b) creating a safe, structured, and welcoming learning environment that reduces disruptive behavior in the classroom (ES = 0.86); (c) providing students with immediate, positive, and corrective feedback after each practice effort (ES = 0.72); (d) establishing strong student-teacher relationships in which teachers have a growth mindset (ES = 0.72); (e) using direct or explicit instruction when teaching complex ideas, strategies, and skills (ES = 0.59); (f) structuring lessons to allow for high student engagement and time on task (ES = 0.59); (g) teaching student cognitive and meta cognitive strategies (ES = 0.67); and (h) providing explicit instruction in reading and vocabulary strategies (ES = 0.67). Although Hattie identified other effective practices, the ones identified above seem feasible for inclusion in the ELA classroom and all have desirable effect sizes. Again, the main influence on student achievement is the teacher (ES = 0.50) and the way she or he teaches (ES = 0.43).

Although Hattie identified instructional practices that are effective in any core class, other researchers have identified practices that are effective specifically for teaching reading comprehension. For example, Allington (2011) identified explicit instruction in reading as a practice that impacts all students. Explicit instruction usually involves teachers engaging in the following actions: offering clear explanations; providing a model of the cognitive and metacognitive thinking associated with expert problem solving and reading; guiding students through practice with partially worked examples; having students practice in cooperative groups and independently; providing immediate, individualized, positive, and corrective feedback; and ensuring that students have multiple opportunities to apply new skills, knowledge, and strategies to content area text-based materials (Kline, Schumaker, & Deshler, 1991).

Ensuring that instruction is responsive to student needs is another key factor in improving student reading comprehension (Allington & McGill-Franzen, 2013). In order to be responsive to student progress and specific needs, teachers need to routinely evaluate the impact of instruction on student growth. Given progress-monitoring data, teachers can adjust instruction, pace, intensity, and materials to better meet student needs. Central to making assessment useful, teachers must use the data to adjust instruction. Specifically, they must give students elaborated feedback so that misunderstandings can be corrected or additional instruction provided.

In sum, skilled and knowledgeable teachers attuned to the progress and needs of their students are critical factors in the instruction of reading comprehension.

Armed with knowledge of effective reading comprehension programs and instructional practices, teachers can impact student reading comprehension outcomes in dramatically significant ways.

9 Close Reading and Deeper Reading Comprehension

Regardless of whether the standards for literacy are part of a national movement or derived by individual states, reading comprehension, as defined earlier in this chapter, requires proficiency in a variety of reading skills and strategies. One increasingly popular strategy or approach to comprehension has been termed "close" reading (Boyles, 2013; Brown & Kappes, 2012; Shanahan, 2013; Snow & O'Connor, 2013). Close reading is sometimes characterized as expecting the reader to extract meaning from the text by careful and multiple examinations of the language in a passage or selection (Snow & O'Connor, 2013). This approach suggests that the reader should focus almost exclusively on the text and not on activities designed to anticipate elements of a story or explore the reader's existing world knowledge base. In short, this view holds that activities that distract the reader's focus from a deep examination of text impact comprehension in negative ways.

In stark contrast to this view is the notion that close reading can and should embrace other elements of comprehension. That is, enhancing the reader's background knowledge and or vocabulary related to the target selection aids comprehension. Hattie's research (2009) seems to support this point by the finding that prior knowledge (often measured by vocabulary) has an effect size of 0.67. Further, close reading is enhanced when teachers consider and surface other sources of information about a topic or subject such as social norms and moral judgment (Snow & O'Connor, 2013). Finally, a singular focus on text-based information seems contrary to the other standards that argue for the importance of discussion and argumentation. This view of close reading is more inclusive of the integration of a wide variety of targeted reading, language, and socially constructed strategies for comprehension.

Although some students will be able to successfully engage in close reading without extensive support, data indicates that many students may not possess the skills and strategies necessary for close reading or comprehension of grade level material (Brasseur-Hock, Hock, Biancarosa, Kiefer, & Deshler, 2011; Buckley, 2013; Hock et al., 2009; NCES, 2013). Thus, it becomes critical that ELA teachers provide direct instruction in research-based reading comprehension strategies. Toward that end, we offer a research-based strategy that is both responsive to the notion of close reading and inclusive of other reading comprehension strategies and instructional practices (Brasseur-Hock, Hock, & Deshler, 2012; Hock et al., 2012). First, we define close reading as reading challenging class material multiple times and for multiple purposes with the goal of integrating text-based information,

the author's interpretation of that information, and the reader's knowledge of the world (Duke & Carlisle, 2011; Kintsch, 1998; Snow, 2002). In the logic described above, the author presents text-based information and offers his or her interpretation of the information. The explanation is explicit and is not necessarily inferred by the reader. The reader, drawing upon his or her knowledge of the world, draws a conclusion about what the text-based information means and also evaluates or interprets the author's conclusion. This process is aligned with Kintsch's (1998) notion of construction integration and situated learning.

During close reading, readers establish a purpose for reading, looks for clues about the content of the reading selection, thinks about what he or she knows about the topic, and then reads the selection multiple times while pausing to think and reflect about ideas and content. In effect, the reader has a conversation with text by reading, pausing at points of interest, and reflecting on ideas.

The first interaction with the text involves reading a "chunk of information" contained in a single paragraph. This pass gives readers a general idea about the information contained in the paragraph. The second read involves finding and highlighting the core idea and most important supporting details and then paraphrasing that information into the reader's own words. The reader is encouraged to make comments or pose questions during this pass. This process is followed for each of the paragraphs in a selection until a section of text is completely read. The key outcome of this initial stage of close reading is to clearly understand the information presented in the text. In a sense, the reader identifies important information in the text and thinks about what the author believes about the ideas in text. Once all the important paragraphs are paraphrased, the reader engages in a third read of the material in which each paragraph is reviewed with the goal of pulling together a summary of the core ideas presented in the entire selection. During this final read, the reader continues to integrate text-based information with information possessed by the reader. Also, the reader answers questions previously posed, thereby creating new knowledge.

During this iterative process, the reader uses multiple skills and strategies that expert readers use as they read. For example, expert readers ask questions about the information or author's point of view, determine the meaning of unfamiliar vocabulary, make notes about key points, write summary statements, and link information to others sources of information. In effect, the reader acts like the "Good Information Processor" described by Pressley, Borkowski, and Schneider (1987). Good Information Processors are expert readers and thinkers who know a wide range of strategies for learning, self-regulate the use of those strategies, know much about the world, and are self-directed and motivated to learn. Thus, we view close reading as drawing upon multiple reading strategies, selecting and monitoring the use and effectiveness of those reading strategies, integrating what the reader already knows about the topic at hand with text-based information, and having the commitment to work hard to create new knowledge and understandings of complex topics.

10 Supporting Close Reading Comprehension with Vocabulary Instruction

Of particular importance for reading comprehension proficiency is academic vocabulary (Nagy & Townsend, 2012; National Institute of Child Health & Human Development, 2000; Snow & Kim, 2007). The relationship of academic vocabulary to comprehension has been well established (e.g., Anderson & Freebody, 1981; Baker, Simmons, & Kame'enui, 1998; Snow & Kim, 2007; Stahl & Fairbanks, 1986). In fact, researchers have found that if students encounter a passage in which they do not know some of the words, their ability to comprehend will be limited because adequate reading comprehension depends on the reader already knowing 90–95 % of the words in a text (Nagy & Scott, 2006). Thus, teaching students how to learn vocabulary within the context of ELA reading materials has the potential to impact reading comprehension in meaningful ways (e.g., Honig, 2010; Nagy & Townsend, 2012; Shanahan & Shanahan, 2008) and lack of word knowledge may very well make close reading a frustrating experience for students (Nagy & Scott, 2006). The good news is that ELA teachers have long recognized the power of vocabulary to impact learning in meaningful ways. However, we also know that typical instruction in vocabulary does not reflect what we know about effective practices for vocabulary instruction (Nagy & Townsend, 2012). Typical vocabulary instruction is often defined as instruction that involves the teacher assigning selected vocabulary from a content area and asking students to look up the definition and write the words in new sentences (Phythian & Wagner, 2007). Below we suggest a research based vocabulary strategy or process for learning vocabulary that direct supports close reading activities. This approach conceptualizes vocabulary instruction as a "tool" for reading comprehension (Nagy & Townsend, 2012) and not a standalone decontextualized activity.

11 Principles of Effective Vocabulary Instruction in English Language Arts

If academic vocabulary is strongly related to reading comprehension, what can ELA teachers do to teach vocabulary that is both effective *and* feasible? Although most of the research on vocabulary instruction has been done with preschool and early elementary students, research-based practices have been identified that lend themselves to instruction in secondary level ELA classes. Foundational to these practices is identifying and teaching a corpus of words that have high utility in a specific content area. There are generally two types of vocabulary words: (a) general academic words that are useful across discipline areas and (b) discipline- or content-specific vocabulary that are unique to a particular course or field of study. The latter are directly linked to core class materials (Shanahan & Shanahan, 2008). That is, the words are found in the context of ELA course materials.

One source of general academic words is the Academic Word List (Coxhead, 2000). Vocabulary interventions using the Academic Word List have found significant gains in student's vocabulary knowledge (Kelley, Lesaux, Kieffer, & Faller, 2010; Snow, Lawrence, & White, 2009). Interventions that focus on discipline-specific interventions have also been shown to be effective in improving vocabulary knowledge and reading comprehension (Vaughn et al., 2009).

Central to a comprehensive reading program for struggling middle and high school students is a research-based process for learning vocabulary. This process incorporates elements identified as being effective with adolescents across both middle and high schools (Hock, Brasseur, & Deshler, 2013) and relies upon the selection of words from the Academic Word List (Coxhead, 2000) or words identified from readings associated with the discipline under study. Then, students are guided through explicit learning activities. Specifically, the process includes the following seven steps:

1. The teacher selects a list of 6–10 high utility words. The teacher and students pronounce each word, and then students rate each word as "known," "heard of," or "never heard before." Words already known by most students are excluded from the list to be studied.
2. The word is presented and examined in context.
3. Either individually or in pairs, students further examine each word by looking at affixes, root word clues to meaning, and context.
4. Students write a draft definition of each word that fits its context and then share the definition with the class.
5. The teacher guides students through an extensive discussion of the draft definitions, helping students identify common features of the definitions, and asks students to share rationales for their draft definitions.
6. The teacher and class agree upon a final definition for each word that is written in student-friendly language and fits the given context.
7. Students independently write new sentences containing the target words. Students also write sentences containing words with affixes and/or roots from the target word. The learned vocabulary is highlighted in discipline-specific readings whenever encountered.

11.1 Necessary Structures and Supports

We mentioned earlier that teaching students to comprehend text at deeper levels will require a school-wide effort. Teachers in all core classes will need to teach students how to comprehend discipline-specific text. Given the diversity in adolescents' reading skills, supplemental support also may be necessary for some students. A framework that provides support for teachers and students and allows for personalization of instruction may be helpful in this effort. Two current frameworks for such support are response to intervention (RTI; Sugai, Horner, & Gresham, 2002)

and positive behavior support (PBIS; Sugai & Horner, 2006; Lewis & Sugai, 1999). These models differ in their area of focus (i.e., RTI on academic skills and PBIS on behavior), but each offers a multi-tiered system of screening and intervention that increases in intensity to address a student's particular area of need. Some researchers advocate for the use of an integrated, comprehensive three tiered model of prevention that combines the features of RTI and PBIS to meet students' multiple needs given that academic, social, and behavioral problems are likely to manifest concurrently (Lane, Kalberg, & Menzies, 2009; Lane, Oakes, Menzies, Oyer, & Jenkins, 2013; Lane & Wehby, 2002; Sugai & Horner, 2002). A comprehensive, integrated three tiered model can address each area and uses a variety of intervention tools to help students who have multiple needs. Conceptualizing reading comprehension in this way is one theme of this book and makes reading instruction the responsibility of all teachers. Moreover, tiered models can help clarify what supports may be available to teachers and students.

11.2 Concluding Thoughts

Reading comprehension instruction for adolescents takes on added importance in the wake of national and international reports of U.S. student performance on measures of reading and math. Recent attention to the 2013 NAEP and 2013 PISA reports in which U.S. student performance is mediocre for some subgroups or, at best, average when compared to 65 other international education entities has heightened concern.

In this chapter we provide reviews of evidence-based programs and instructional practices, thoughts about close reading and close reading strategies, highly effective instructional practices, a comprehensive framework for conceptualizing whole school response to teaching reading to a very diverse student population, and creating a classroom and school environment conducive to learning.

Central to success in improving reading comprehension for middle and high school students is a teacher who is passionate about teaching, passionate about the success of the students he or she teaches, and highly skilled in the delivery of effective instructional practices and programs. However, the burden of reading comprehension instruction does not rest solely on the shoulders of teachers. Teachers will need extensive professional learning and instructional coaching support to implement many of the practices suggested in this chapter. In addition, instructional support should be based on student data and provided within a framework for behavioral, academic, and social emotional needs. When these factors are in place, improving reading comprehension outcomes for middle and high school students can become a reality.

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