

# Book Review:

## Improving Reading Comprehension of Middle and High School Students

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This highly readable volume should be required reading for all middle and high school teachers across all content areas. Education administrators and those who provide education and professional development for teachers should also find it quite useful. Parents will also find the information valuable and clearly presented. The overviews of relevant research in each chapter are succinct and helpful information for classroom implementation. The volume, with its impressive cadre of contributors, represents a crucial contribution to moving the information learned over recent decades into practice. Reed and Santi have done an admirable job of achieving their goal of providing research-based evidence on adolescent literacy learning that moves toward a blending of general and special education and better learning gains for all students, including those with learning disabilities.

### **Chapter 1: What Do Models of Reading Comprehension and Its Development Have to Contribute to a Science of Comprehension Instruction and Assessment for Adolescents?**

Barnes sets the stage for the entire volume, discussing the contribution of cognitive models of reading comprehension to instruction and assessment for this age group and examining component skills and process models and their importance for adolescent readers. Her clear, coherent explanation of the differences and value of both makes this information accessible to interested teachers. She also provides solid background for those seeking to understand how research evidence can aid us in understanding the development and improvement of adolescent reading comprehension. It is heartening that she not only clearly lays out the importance of intervening with adolescent readers who have decoding difficulties, but that she also clearly points out that these students benefit more from an intervention that integrates decoding and comprehension work—a point made by others (e.g., Lovett, Lacerenza, De Palma, & Frijters, 2013). Barnes also addresses discourse and text characteristics. After

reviewing what is known about the development of inferencing and integration and their relation to reading comprehension, she points to research that develops and tests inference and integration interventions for adolescent readers. As for text characteristics, Barnes asserts that while research has focused on the structure of narrative texts, text strategy instruction for informational texts can be helpful for those with learning disabilities and that as students increase their reading in discipline-specific informational texts, the structures of these texts may be less familiar than those found in narrative texts. Having more educators aware of these facts could go a long way to reducing the complaints often heard about the push under the Common Core State Standards (CCSS, National Governors Association Center for Best Practices [NGA], Council of Chief State School Officers [CCSSO], 2010) to increase use of informational texts for students in the elementary grades. Her overview of the variations in text difficulty for different disciplines is enlightening (and is picked up in greater detail in subsequent content-specific chapters).

Anyone reading this chapter should come away with the clear understanding that reading by 9 years old is not enough; good, solid reading instruction in grades K-3 is critically important. However, ongoing work on reading comprehension is needed and should include instructing students on word and world knowledge as well as inference and integration. In addition, having teachers scaffold student learning so their students can better understand the nature of the texts from which they expect students to learn in those disciplines is extremely important. This chapter competently sets the stage for the chapters that follow.

### **Chapter 2: Reading History: Moving from Memorizing Facts to Critical Thinking**

Massey provides information on the characteristics of history texts that differentiate them from informational texts in other disciplines and suggests what it

might take to help students gain expertise in reading and to learn from history texts. Within a brief history of content area reading instruction, which moves from general strategies to a more discipline-specific focus, she also provides a background for reading history, telling us that “it is the texts themselves, as well as the thinking about those texts that distinguish history from other disciplines” (p. 22).

Massey tells us that students often see history texts as authoritative, which limits inquiry and discussion, reinforced by the narrative structure of most of these texts. However, the use of primary sources presents its own challenges for teachers and students, (e.g., variety and multiplicity of genres, text structures, points of view, and varying quality) which Massey describes clearly in the sections of the chapter. More general challenges for both primary sources and history texts include the heavy reliance on background knowledge, the specialized vocabulary and language patterns used, and the traditional reliance on memorization. She views reading and thinking as inseparable if one is to comprehend a text “like a historian.”

Massey’s descriptions and explanations of expert and novice historians should be valuable information for teachers in general but especially helpful to history teachers. All of the information in this chapter should help teachers move students away from taking history texts as a final authority toward thinking critically and synthesizing multiple sources. The overall purpose of reading history should indeed disseminate to other disciplines.

This chapter also clearly indicates the importance of teaching students about different genres and what is characteristically unique and must be taken into account about them—something important for history and also across other disciplines. It also clearly illustrates the need for teachers themselves to understand and be able to teach aspects of literacy both in reading and writing within the discipline. In fact, discipline-based literacy interventions for middle school readers have shown good results in content learning and reading comprehension in the content area, although they have not been strongly generalized to reading comprehension as measured by standardized tests. Massey cites Shanahan (2009) regarding the developmental nature of literacy skills, culminating in discipline-specific literacy by suggesting that perhaps it’s time to look both within and across disciplinary literacy skills and instructional approaches to continue to track the developmental trajectory of literacy at a deeper level. Massey points out that instruction allowing students to compare processes in different disciplines could

help in developing metacognition. This seems ripe for study, since it is not clear that we have prepared teachers to do this, and it would be quite interesting to see how students might respond to such instructional approaches; this might also be enlightening and helpful to teachers. Massey calls for research on the value of modified texts versus original sources and how best to use these to ensure students’ learning of complex concepts.

Finally, issues of motivation, engagement, and student resistance, as well as teacher expertise in both content knowledge and “brokering” student understanding, are considered—again, not disciplinarily unique issues with adolescents, but crucially important and unfortunately with no easy answers. Massey concludes by emphasizing the need to not separate literacy from critical thinking and sees this integration happening optimally through cross-disciplinary collaboration on translating theory to practice, where teachers “stand as mediators.”

### **Chapter 3: Reading Mathematics: Moving from More than Words and Clauses; More than Numbers and Symbols on a Page**

Avalos, Bengochea, and Secada inform us that math texts seem to lead the disciplines in concepts per sentence and use of discipline-specific terminology and symbols. In this chapter the authors seek integration between teaching generic comprehension strategies to be used in reading math texts and teaching students to understand and translate symbols to solve problems. They cite research indicating the need for disciplinary-specific reading instruction and scaffolding, especially for socially and culturally diverse groups of learners. They compare learning the “language of math” to foreign language learning. They refer to the importance of “ways of knowing” in a content area, which they describe as “knowledge and reasoning processes found in the particular subject” (p. 52, citing Heller and Greenleaf, 2007).

The chapter begins with an overview of recent research on how students and teachers use math texts in secondary classrooms. Students do not often read the text, as teachers see themselves as facilitators and the main source of information. Avalos and colleagues cite Shepherd’s (2005) account of her scaffolding effort to get students more actively engaged with the text using some creative means of forcing interaction with the text; however, her measure of success was not student learning, but attitude, because “she believed that students’ feelings about mathematics were a better indication of their success with the subject than passing the course” (p. 54). The report of Rezat’s (2009,

2013) work seems more informative and useful; his work on self-regulated learning and utilization scheme types delved into how the structure of the text and the teacher's mediation of student use of the text affected student learning strategies. The work of Weinberg, Weisner, Benesh, and Boester (2012) also reported that the textbook chosen along with the students' attitudes about math are important in attempting to maximize student learning based on a survey of undergraduates. The limited research available indicates that texts heavily influence instruction and are used by teachers as a planning guide. However, students often rely on teachers rather than reading the math texts, and they tend to emphasize problem solving over understanding of the problems and the solutions to them.

Avalos and colleagues then present their own research focused on explicit instruction of math academic language to low-achieving English learners (ELs), low-achieving fluent English speakers, and high-achieving fluent English students in middle school. Based on in-person interviews with each student, they found that worked examples were felt to be most helpful to students, although low-achieving students indicated the need for teacher assistance. The authors offered several conclusions: EL students read both active and passively, while fluent English students read more actively; word problems were difficult for all low-achieving students who also did not see value in writing for math understanding; and teacher text mediation and scaffolding of active reading were important for math learning, especially for lower achieving students.

Avalos, Bengochea, and Secada suggested that teachers should spend time assessing and building prior knowledge and conceptual understanding attending closely to language structures, especially with ELs and low-achieving students. Furthermore they suggested teachers should not focus exclusively on solving the problems, but using problems to develop conceptual understanding and reasoning.

#### **Chapter 4: Understanding Causality in Science Discourse for Middle and High School Students. Summary Task as a Strategy for Improving Comprehension**

León and Escudero attribute students' difficulty in science and reluctance to pursue careers in science disciplines at least in part to the difficulty of most science texts (i.e., jargon, symbol use, math language, and abstract concepts that do not relate to everyday experiences). They convincingly argue with data and explanatory examples that summarizing can be used

as a teaching and learning activity with great value to high school and college students and that it can be used to evaluate reading comprehension. This will require changes in education practice, but it seems clear that such changes are needed based on PISA reports indicating that US and Spanish 15-year-olds are not efficient readers.

Likewise, León, Olmos, Escudero, Canas, & Salmeron, (2013) studied students at age intervals of 12, 14, and 16 regarding their ability to produce a summary of a 500-word text. They assessed students' summaries for content and coherence and surprisingly found little difference based on age, which they attributed to students' failure to elaborate and synthesize. They lament the education system's failure to focus on reading comprehension, metacognitive awareness, and skills needed to write good summaries in favor of merely reproducing what is said or written (i.e., paraphrasing rather than summarizing).

Their excellent brief literature summary on causal relations as criterial in guiding inferential processing and the development of coherence sets the stage for a discussion of how causality is organized in expository science texts as compared to narrative. León and Escudero assert that because the nature of science is to explain the *why*, *what*, *how*, and *when*, it is less likely to be presented chronologically. Therefore, it requires a reorganization of information derived from text in order to comprehend and summarize information. Having established this, they then believe that the ability to produce a good summary containing synthesis and coherence demonstrates comprehension.

León and Escudero studied high school and college students, comparing the causal network in a narrative text to that in the student summaries. Their results supported the hypothesis that the ability to identify causal relationships in a text is a factor in distinguishing the competency of readers. Based on this and experimental studies that have shown the value of writing summaries to recall content, these authors view summary writing as a good measure of science text comprehension and as a valuable means of improving comprehension.

#### **Chapter 5: Reading Comprehension Instruction for Middle and High School Students in English Language Arts: Research and Evidence-Based Practices**

Hock, Brasseur-Hock, & Deshler address the English language arts classroom for adolescents and provide information on "high impact" reading strategies. They call for changes not only in instruction, but also in curricular materials, teaching strategies, assess-

ments, support systems, and professional development, all of which are needed if schools are to meet college and career-readiness standards. The chapter builds on the León and Escudero discussion of comprehension, causality, and inference and the other chapters in the book addressing the complexity of reading comprehension, and takes the discussion into the practices of ELA teachers.

To highlight the importance of supporting ELA teachers, Hock and colleagues cite their own work (Hock et al., 2009), demonstrating that 61% of adolescent struggling readers scored a standard deviation below proficient readers in all five domains of reading tested (e.g., alphabetic, word-level reading, fluency, vocabulary, and comprehension) and 73% had comprehension difficulties. They also summarize the common features of the six reading programs determined by the What Works Clearinghouse (WWC) to have evidence of significantly improving reading comprehension for middle and high school students: explicit skills and reading comprehension strategy instruction, cooperative learning activities, and imbedded reading comprehension instruction within the core curriculum. Furthermore, they draw upon Hattie's (2009) synthesis of studies regarding general instructional practices, indicating that these too can be incorporated into ELA teachers' repertoires: having students record and track their own performance, creating an optimal environment, knowing how and when to provide optimal feedback, and creating important teacher-student relationships. Critical here is also utilizing explicit instruction, providing structure to support engagement, learning complex ideas, and using strategies for learning vocabulary and metacognitive concepts. Hock and colleagues also cite data on the critical role teachers play in student success (including attributes of teachers), the importance of assessment-informed instruction, and the broader knowledge of learning and cognition that will make teachers better able to cope with students' learning differences. In their discussion of close reading, Hock and colleagues emphasize the importance of teaching both skills and strategies that will support the student in a close-read of text, enabling students to integrate background knowledge, drawing conclusions, and objectively assessing what is said in the text. Vocabulary instruction and other supports students need to accomplish this are clearly reviewed as well.

Hock, Brasseur-Hock, & Deshler conclude this chapter with their call for improved, evidence-based programs and practices, support for students based on ongoing monitoring and assessment, a whole-school response to teaching reading to today's diverse popu-

lation of students, a strong program of professional development, and support for ELA teachers. They call for dramatic changes, but are optimistic that these can be accomplished, and they have clearly outlined practical ways all this can be accomplished.

### **Chapter 6: Improving Comprehension Assessment for Middle and High School Students: Challenges and Opportunities**

Sabatini, Petscher, O'Reilly, & Truckenmiller review what has characterized standards in reading assessment prior to recent advances in measurement, learning sciences, and technology. They join the popular protest in pointing out that US schools spend too much time on testing and on test preparation, but unlike many critics, they are not anti-testing; instead they critically analyze what can be done to lessen the time consumed and heighten the value of testing not only for accountability or achievement reporting, but also for student learning. The authors also provide basic information and references that the reader can use to follow up on assessments that can guide instruction and intervention.

Citing the recent international assessments and development of new standards for educational achievement (CCSS), which have resulted in a call for a new generation of reading assessments, Sabatini and colleagues voice guarded optimism about new and better assessments based on advances in technology coinciding with changes in attitudes about assessment and scholarly reform. In the final section of this chapter, they present information on the work of their team at Educational Testing Services in partnership with three universities under the funding and auspices of the Institute of Education Sciences. This work was to develop reading comprehension assessments, specifically the Global, Integrated Scenario-based Assessment (GISA) and the Florida Center for Reading Research Reading Assessment (FRA), which are complementary assessments that together offer a broader picture of reading achievement. Each has practical utilities that can not only provide student achievement information but can also potentially be used to guide more tailored instruction. Although not as readable as the other chapters in this volume, this chapter provides important information documenting progress in changing instruction and improving student performance.

## **Chapter 7: Reading Comprehension Skill Development and Instruction for Adolescent Literacy Instruction for Adolescent English Language Learners: A Focus on Academic Vocabulary**

Galloway and Lesaux address reading comprehension; their goals are to increase awareness of the population of English-learners (EL) students, to improve the understanding of the process of reading comprehension generally, but also very specifically to give the reader foundational information about this process and its challenges for adolescent EL students. They then present research on academic vocabulary instruction for this group, as well as a literacy research agenda.

Their overview of who ELs are and the influences of poverty on the literacy learning of both monolingual and EL students should be required reading for all teachers at any grade level. This chapter puts in perspective the importance of recognizing the challenges faced by these students and addressing them in all classrooms in all states. Galloway and Lesaux offer a clear, brief explanation of bilingualism and then “unpack” reading comprehension in their discussion of why it is especially challenging for middle school ELs and their peers. The emphasis on the importance of both skills and knowledge-based competencies and clear discussion of these provide useful background for all teachers, not just those particularly interested in ELs. In their own research, the authors have demonstrated that while many EL middle schoolers were actively using reading comprehension strategies, often these were limited in value due to students not having the necessary content knowledge and vocabulary.

Galloway and Lesaux emphasize teaching vocabulary using definitional and contextual information, providing multiple encounters with the target words, using depth over breadth, targeting high-utility words, as well as offering suggestions on how to teach targeted words. They point out that the recommended interventions also provide for some broader learning, such as teaching morphology skills, which support independent learning, an approach that will benefit all learners, not just ELs.

## **Chapter 8: Special Education in Middle and High School**

Volume editors Santi and Reed provide a clear and objective historical overview of education legislation that can serve as a primer for parents and new teachers and a solid review for other educational stakeholders. The following statement regarding their rationale holds not only for the details presented about IDEA

and response to intervention but also for the volume as a whole; it should have been the marching theme for all of us when IDEA was reauthorized in 2004: “We present the legislation and its component provisions with the intent of helping those in general education and special education move from considering their systems as separate to a blended approach for working with all students” (p. 185). I join them in calling for research-informed policies aimed at integrating general and special education at both the state and local levels.

The section on current issues for students with disabilities follows a natural transition from legislation in the previous section to highlighting the Common Core State Standards (NGA, CCSSO, 2010), a national movement not levied by the federal government but by State Governors and Chief State School Officers. Santi and Reed then offer a succinct summary of key points in the chapters of this volume and how they can serve to help educators move forward to provide improved literacy instruction and intervention across content areas for students with disabilities. They also include research-supported instructional recommendations such as providing explicit content vocabulary instruction, teaching inference making, improving student metacognitive strategies, and supplementing background knowledge in new areas. Interestingly, in their section on computer-based texts, these authors cite research showing that reading-disabled students did not perform at a higher level when online resources were made available to them, concluding that this has more to do with being strategic readers than to their needing “non-traditional” texts and resources. This indicates that structured experiences provided by skilled teachers are still needed as well as research on the use of electronically delivered texts.

Santi and Reed close by calling for middle and high school teachers to move from traditional approaches to more interactive engagement, whereby they may break through the passivity of many students with learning disabilities and assist these students in making academic gains. Overall, this volume makes it clear in significant and understandable detail that reading comprehension is highly complex, requires explicit instruction, and requires deep knowledge of reading and the structure of language on the part of the teacher. This is true for teachers of middle and high school students across disciplines. In all disciplines and for instructing diverse groups of learners, teacher professional development and improved teacher education are needed, along with ongoing support, which should be inherently part of any good professional development program. Unfortunately

this is not always the case. The clear delineation of differences in texts faced by adolescent readers across disciplines is at once basic, striking, and important. The chapters within this volume make that clear and should help educators take a leap forward in the translation of research to practice. I congratulate Santi and Reed in putting together this coherent, interesting, highly readable, and immensely helpful volume.

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