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Introduction

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The chapters in this book provide windows into the research on effective interventions to help students learn to read and write. The importance of preparing all students to be skilled readers is a widely embraced value. Teachers across the grade levels immediately appreciate this objective, because, as one first grader informed us, "Reading affects everything you do." Proficient literacy skills are critical to negotiate life in the complex 21st-century world. Many students face special challenges in acquiring these skills. Students who do not acquire a strong foundation in reading skills may experience continued and broadening poor school outcomes in reading and in content area learning, and diminished motivation to succeed in school.

Effective reading instruction today is richly informed by research extending from cognition and neuroscience to school-based intervention studies on components of the reading process. One of the early research summaries on reading instruction was conducted by Jeanne Chall (1967) in her review of beginning reading approaches. In her final book, Chall (2000) lamented that teaching practices in reading often follow "a direction opposite from the existing research evidence" (p. 180). She wrote of the need for teachers to have access to research, and a consensus on which practices have adequate research evidence to support their use. Chall noted the beginning of this evidence in the research on first-grade reading instruction by Bond and Dykstra (1967), followed by more recent reports supporting benefits of systematic instruction in phonics (Adams, 1990; National Reading Panel, 2000; Snow, Burns, & Griffin, 1998). This evidence continues to

be summarized in published research syntheses, although these reports are rarely written specifically for practitioner audiences. In this volume, chapter authors summarize evidence on specific reading interventions and approaches designed for preschool, younger, and older students.

Certain facts make it clear that instruction across the grade levels must be informed by this evidence. In 2005, 69% of all fourth graders performed at basic or below basic levels of performance. This proportion is considerably larger for minority students. The challenges teachers face in preparing students to achieve at high levels in literacy skills are daunting. Because reading skills are taught and learned across content areas, all teachers must utilize evidence-based practices that benefit low-skilled students.

The chapters in this book describe the areas of reading instruction in which this evidence has been translated into effective instructional practices. This translation process has been supported in large-scale efficacy studies. Researchers have tested research-based approaches in real-world settings. Furthermore, the research tools available in recent studies allow researchers to frame their findings and recommendations for specific subgroups of students more carefully and take into account student characteristics. Not surprisingly given the complexity of the act of skilled reading, an intervention is often not equally effective for all students.

Chapters address the major components of reading and reflect the developmental course of reading skills. Several chapters address the development and support of early reading skills, including preschool literacy instruction. A growing body of research describes the emergent literacy skills that support later reading achievement and effective classroom activities to develop these foundation skills. Other chapters review the research on early stages of word reading and tutoring approaches for primary-grade students in beginning reading skills. The complexity of reading comprehension warrants several chapters that focus on specific types of comprehension instruction, including vocabulary skills prerequisite for understanding texts, skills in negotiating text structures and themes, cooperative learning approaches, skills in constructing the meaning of texts, and applying effective strategies for comprehension. Chapters on spelling and writing reflect the reciprocal relationship of reading and spelling, and the shared influence of language skills on reading and writing. Many of the chapters include information from meta-analyses on reading topics that synthesize these research studies.

The studies described in these chapters directly reflect the role of federal support for research on reading development and instruction. Most of the research summarized by chapter authors has been supported by the National Institute of Child Health and Development and the U.S. Department of Education. This research has helped us understand how children learn to read, how to identify students at risk for reading disability, and effective interventions for children with reading difficulties.

Finally, as the table of contents reflects, the chapters do not fall easily into clear themes based on developmental stages or reading subprocesses. In fact, the

chapters may appear to present a sampler, which in a sense is accurate. We confess that we chose topics and chapters based on a match between the practical needs of teachers and the reading topics in which a strong body of research has developed to inform instruction. We invited authors whose work in these areas builds upon strong research foundations and offers valuable models and guiding principles for practitioners. As noted earlier, readers will note a concentration of chapters on comprehension themes. The nonunitary nature of comprehension calls for taking it apart and considering the multiple processes and subskills involved in understanding text. Different types of text, for example, present different comprehension challenges. Comprehension is also influenced by readers' purposes for reading. Chapters 9 through 11 examine various aspects of comprehension and intervention targets.

In each of the chapters of this book authors summarize research and theory in broad areas of reading that have influenced and provided a foundation for their work. Contributors summarize the research and its relevance for the audience of practitioners with whom they have also worked in their own intervention studies. These studies allow researchers to draw increasingly clear lines from research to applications for effective instruction. Wherever it is appropriate, authors outline features of instruction and teaching principles identified in intervention studies that reflect a research-to-practice framework.

Chapter 2 begins with an overview of the development of phonemic and alphabetic skills from preschool into kindergarten, and a history of research on these precursor skills. Research on the important role of phonemic awareness in early reading development has strongly influenced how educators identify children at risk for reading disabilities. Research on the role of phonemic awareness in predicting reading achievement led to the development of effective interventions to teach these skills to kindergarten and preschool children. In this chapter, O'Connor reviews the developmental course of phonemic awareness skills and their transfer to phoneme segmenting, blending, and, finally, skilled word reading. Chapter 2 highlights features of these interventions that are of particular interest to practitioners, including their average intensity and duration, and ways in which this instruction has been effectively delivered. Phonemic skills are most effectively taught in combination with alphabetic skills, and O'Connor provides examples of what this may look like in practice. The chapter concludes with a sample instructional routine and sequence to teach phoneme segmenting skills and spelling.

It is well appreciated that literacy skills begin to develop long before children enter kindergarten, and in Chapter 3, Roberts describes the preschool foundations for literacy success. She summarizes research on the foundation skills for literacy development: phonological awareness, oral language, and alphabetic knowledge, including basic learning mechanisms that support preschool instruction and learning. Research firmly establishes the important role of these skills in literacy development, and Roberts notes seminal studies in each area and evidence from preschool intervention studies that support recommendations for instruc-

tion. Roberts acknowledges special features of preschool instruction and corresponding principles of effective interventions implemented at the preschool level. Finally, the chapter includes a summary of "important details" that characterize each area of literacy instruction and are essential aspects of instruction teachers can easily incorporate as they plan instruction for their preschool students.

Chapter 4, by Spear-Swerling, describes the development of word reading skills, word reading problems, and features of effective interventions. This chapter provides a summary of information on phases of word recognition development that is essential for differentiating beginning reading instruction. Spear-Swerling reviews features of core phonics instruction, as well as phonics interventions for children who struggle to acquire accurate and efficient word reading skills, including strategies for reading more complex and multisyllabic words. Based firmly on the robust research on word reading instruction, Spear-Swerling's chapter offers teachers practical advice for assessment and instruction that supports word reading development. Sample teaching scripts include a word building activity used with poor decoders, and scripts for teaching syllable types and phonetically irregular words, and providing feedback and support during oral reading practice.

In Chapter 5, Nunes and Bryant summarize research on the role of morphemic knowledge in word reading. This chapter includes a summary of their work on how to assess children's knowledge of morphemes and interventions to teach children about morphology. Students are often unaware of the morphological information encoded in words. As Nunes and Bryant share in this chapter, instruction in morphology has both reading and spelling benefits for both lower and higher skilled students. Furthermore, these morphological interventions have benefits for students beginning in the primary grades. This chapter includes examples of specific teaching activities from the authors' training program to develop aspects of morphological awareness.

In Chapter 6, Gerber and Richards-Tutor summarize the history of encoding language with print and how language mergers contribute to the spellings of words today. Using research findings from the past 40 years, they show the instructional principles that generate the strongest gains for poor spellers. They also capture how excellent spellers study the morphology and language origins of words, and draw implications for how teachers can structure spelling lessons more effectively in schools. Drawing on stage theories of learning to spell, Gerber and Richards-Tutor demonstrate how correct letter sequences in children's spelling attempts can be used to monitor progress of emerging spellers and show their improvement over time.

In Chapter 7, McKeown and Beck describe the deep divide between our understanding of vocabulary acquisition and how vocabulary has been taught in the classroom. They review the research on how word meanings are acquired and stored as connections with other word meanings and contexts. Effective vocabulary instruction builds upon this knowledge base of the role of context in learning words and the incremental nature of vocabulary learning. McKeown and Beck summarize research on effective vocabulary instruction and promising

new approaches for young students. The authors address the categories of words that leading researchers judge to be most worthwhile to teach. The chapter concludes with a summary of features of effective instruction, the use of dictionary definitions, and a sample weeklong instructional sequence illustrating vocabulary instruction that builds upon storybook reading with kindergarten students.

In Chapter 8, Hudson summarizes the research informing a multicomponent view of reading fluency. This expanded and developmental conceptualization of fluency encompasses automaticity, efficiency, and fluency at the sublexical, lexical, and text levels. This view reinforces the value of fluency as an instructional objective across the reading acquisition continuum. The evidence-based fluency approaches Hudson describes are clearly linked to specific aspects of fluency that hinder coordinated and fluent text reading. These interventions include methods to develop underlying word level accuracy, reading rate, and multilevel approaches. Hudson addresses the challenge that this expanded view of fluency creates for student assessment and emphasizes the importance of correctly identifying the type or level of fluency impediment prior to matching the student to an intervention.

Jitendra and Gajria, in Chapter 9, summarize research on teaching main idea and summarization skills to students with learning disabilities. They describe their work on instructional programs for teaching main idea and summarization skills to middle school students with learning difficulties. Features of their effective interventions, which characterize the interventions summarized across many chapters in this volume, include explicit instruction in strategies with extensive practice opportunities and ongoing assessment in student use of the strategies. Jitendra and Gajria provide extended teaching scripts and sample passages that clearly illustrate how teachers can implement this instruction.

In Chapter 10, Klingner, Morrison, and Eppolito consider the role of metacognition in comprehension instruction. Students who struggle with reading often have less knowledge about the cognitive processes that support comprehension and difficulty managing the comprehension process. This chapter presents a summary of metacognitive strategies that help students become aware of and regulate their thinking processes surrounding comprehension. Three types of metacognitive strategies are reviewed: planning, monitoring, and evaluating. The authors review the research and outline procedures for evidence-based single strategies, including purpose setting, activating prior knowledge, and prediction. They describe strategies that can be implemented before, during, and after reading, including summarization and main idea instruction. Finally, they describe more time-intensive multicomponent strategies that include cooperative group learning activities.

Reading comprehension is further "unpacked" in Chapter 11, on text structures and theme. Williams and Pao lay out distinguishing features of narrative and expository text structures that enable the reader to organize text content, and to construct a mental representation necessary for comprehension. The authors describe research on two programs designed for use with either narrative or

expository text. The Theme Identification program provides instruction to help students identify plot elements that underlie story theme in narrative texts. The Close Analysis of Texts with Structure program targets strategies for use with cause–effect expository text structure. The chapter includes examples of each type of lesson that illustrate teaching activities and features of instructional design that characterize each program. Writing activities in each program provide scaffolded practice with text structure and help students learn how to organize and edit their writing about narrative and expository texts.

In Chapter 12, on peer-mediated approaches, Abbott, Greenwood, Buzhardt, Wills, and Terry summarize the contributions of these approaches to Tier 1 instruction in classrooms where fewer than 80% of students are meeting literacy benchmarks. Abbott and her colleagues focus on two widely used and studied peer-mediated approaches: Classwide Peer Tutoring (CWPT) and Peer-Assisted Learning Strategies (PALS). Both approaches provide dedicated time for reading aloud, with clearly sequenced peer interactions to develop comprehension. The authors summarize research supporting the benefits of these approaches for both literacy outcomes and academic engagement across diverse student populations. The chapter includes a detailed description of the CWPT basic protocol. Abbott and her colleagues draw upon their research on CWPT implementation to discuss training and fidelity procedures associated with improvements in student outcomes.

Chapter 13, on supplemental interventions, summarizes research on effective instruction by paraeducator tutors in early word reading and in fluency skills. As Vadasy summarizes, a growing research base on tutoring by paraeducators or teaching assistants supports their training for roles in supplementing instruction in specific foundation reading skills. The research summarized in this chapter supports the use of these support staff particularly for instruction in specific skills that present common obstacles to reading development: early decoding, word identification, and fluency, areas in which lower performing students often need more explicit instruction and more frequent and scaffolded practice opportunities. High-quality instructional design and training are consistent features of effective supplemental interventions. The chapter highlights design and implementation features that characterize effective supplemental tutoring interventions.

As Ferretti and De La Paz address in Chapter 14, more specialized skills are required to read and write effectively as content area texts and topics become increasingly challenging. Students must learn to coordinate specialized vocabulary, domain-specific knowledge, and complex text structures. Strategies and skills in interpreting information assume a larger role in text comprehension. The authors describe reading and writing activities that teachers can use to teach students collaborative reasoning and writing strategies with social studies and history content-area texts. The strategic reading and writing behaviors they outline offer a means for teachers to organize cooperative group inquiry on content topics that require skills in evaluating and interpreting texts, and debating and defending different points of view.

Teachers today work with classrooms of increasingly diverse students from many language and cultural backgrounds. Many students from low socioeconomic backgrounds, as well as language-minority students, are not attaining proficient levels of reading. In Chapter 15 Orosco and O'Connor summarize the work of several groups of researchers who have studied the benefits of early reading interventions for primarily Spanish-speaking English language learners (ELLs), the largest language-minority student population in the United States. Not surprisingly, this research reveals that features of instruction found effective in many interventions for English-only students also help ELL students make progress in language and reading skills. Researchers have identified and continue to investigate promising approaches to instruction in reading and vocabulary skills for ELL students in more rigorous studies. Orosco and O'Connor conclude, as Goldenberg, Rueda, and August (2006) concluded in their review, that research is needed to understand better how sociocultural characteristics of teachers and students influence literacy outcomes of language-minority students.

The sobering findings from the 2005 National Assessment of Educational Progress (NAEP) on the large numbers of fourth graders who are not reading at proficient levels remind us of challenges that face us in teaching older students. These challenges expand as older students encounter a broader range of texts, more difficult text features, and more demanding writing assignments that hinge upon text comprehension. Early instruction in decoding skills is often supported by reading specialists. Middle school classroom teachers become responsible for teaching literacy skills in comprehension strategies, vocabulary, and writing in the context of challenging content-area instruction. In Chapter 16, on older readers, O'Connor and Goodwin address the specific reading needs of students in grades 5–12. Breakdowns in reading skills for older students may occur at word or text levels. The authors summarize interventions that address problems students encounter in reading multisyllabic and affixed words that require knowledge of morphological structures and multiletter spelling patterns. As the proportion of more difficult and lower-frequency vocabulary words increases in their school texts, many older students begin to struggle due to their limited vocabulary knowledge. O'Connor and Goodwin review findings on keyword and interactive strategies that may help students learn, remember, and productively use new vocabulary. Confronted with word- and text-level obstacles, many students develop decreased motivation for reading. Research on computer-assisted and individualized approaches to reading instruction suggests ways to maintain students' engagement and interest in reading. Finally, the chapter includes an overview of research on fluency and comprehension interventions found to benefit older students, including repeated reading and comprehension instruction in story content, text structures, and strategy application.

This book is written for teachers, teacher trainers, and graduate students, with chapters chosen to help readers access the broad research bases on these topics and gain a more in-depth understanding of the interventions and research by the chapter authors. In Michael Pressley's (1998) excellent book on the state of

the art of research on reading instruction, he concluded that much more research and implementation are needed. We hope that the chapters in this book engage readers and aid them in continuing to build background knowledge in reading research and refine their implementation of research-based literacy instruction. The evidence-based literacy interventions described in these chapters can be integrated in whole-class, small-group, or individual instruction. Much more remains to be learned about the widespread scale-up of these interventions in response-to-intervention applications.

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