

Chapter 2
A Model of Reading Instruction

Direct Instruction Reading

Fourth Edition
2004

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PREFACE

In April 2000, the National Reading Panel, a panel of scientists charged by the U.S. Congress with the responsibility of reviewing research in reading instruction and identifying methods that consistently relate to reading success, issued a long-awaited report. The findings of the National Reading Panel confirmed the validity of the content and procedures that have been included in Direct Instruction Reading since the first edition. The panel pointed out the importance of teaching phonemic awareness (Chapter 6), letter-sound correspondences (Chapter 7), systematic and explicit phonics (Chapters 9, 10, 11, 14, and 15), fluency (Chapter 18), vocabulary (Chapters 19 and 20), and strategies for comprehending narrative and content-area text (Chapters 12, 19, 20, 21, 23). Furthermore, the panel pointed out the importance of systematic and explicit teaching in all areas.

Direct Instruction Reading, unlike most other textbooks, does not describe multiple approaches to teaching reading but instead provides detailed information on how to systematically and explicitly teach essential reading skills. The direct instruction approach is highly congruent with the findings of the National Reading Panel. The procedures described in this text have been shown to benefit all students but are especially powerful with the most vulnerable learners, children who are at risk because of poverty, disability, or limited knowledge of English.

This textbook is designed to provide teachers and soon-to-be teachers specific information that can help them to be effective with all their students. The text not only provides information on what to do but explains why particular procedures are recommended. Even though publishers have begun to incorporate more research findings into their reading programs, teachers will find great differences among programs regarding their effectiveness with at-risk students and must be prepared to make needed modifications and adjustments to ensure successful learning for all students.

Direct Instruction Reading presents information on how to help students succeed through structuring initial teaching procedures so that the teacher presentation is clear, using language and demonstrations that can be understood by all children: sequencing the content to be sure that all essential skills and knowledge are taught in an aligned and coherent manner; using teacher presentation techniques that foster a high degree of interaction between teacher and student; and providing adequate practice and review to develop high levels of fluency and accuracy.

Direct Instruction Reading attempts to help teachers create a learning and instructional environment for teaching students in a humane and efficient manner. A learning environment is humane when the environment enhances a student's self-concept. Our experience and our reading of the research suggest that competence comes first, leading to increased self-concept. A learning environment is efficient when the maximum amount of learning occurs in the shortest possible time with the fewest resources.

We have organized the chapters of this text to be congruent with the five major areas of reading instruction identified by the National Reading Panel. We continue to devote a disproportionate amount of the book to beginning reading because the first months of reading instruction are immensely important to later reading success.

The major changes in this edition of Direct Instruction Reading include a more in-depth discussion of the difference between direct instruction materials and general direct instruction teaching techniques, additional descriptions of how critical content is taught in the recently published comprehensive core reading programs, enhanced suggestions on how to strengthen instruction for at-risk students when using comprehensive core programs, additional information on how to use assessments in establishing an overall reading program, and updated and enhanced chapters on comprehension.

As with previous editions, this edition is not intended to be a definitive handbook. As we work with students, we continue to learn, and this learning enables us to improve our procedures. Procedures can always be improved. The main purpose of the text is to empower teachers by providing them with specific suggestions for problems they will encounter in the classroom. It is our hope that the systematic procedures recommended here will stimulate the development of even better procedures. Furthermore, we encourage teachers to view learning as an outcome of instruction rather than as a function of inalterable attributes of the learner. We also encourage commercial publishers to design better programs for students. Overall, we hope that this book contributes to better teaching methods for all students, particularly difficult-to-teach and at-risk students.

ACKNOWLEDGMENTS

We are grateful to many people. Foremost, we are grateful to Zig Engelmann, whose empirical approach to instructional design has resulted in the development of many highly effective instructional programs. Many of the procedures in this book were derived from The Reading Mastery Series, Language for Learning, and The Corrective Reading Series, authored by Engelmann and his colleagues. More than 40 years ago, Engelmann incorporated the systematic and explicit teaching of phonics, phonemic awareness, vocabulary, fluency, and comprehension into his programs. He recognized the importance of explicitly teaching, foundational language and reasoning skills while students were learning how to read so that the door to higher-order comprehension could be opened to all children. His programs still remain in a class by themselves as models of how to create success for all children, particularly the most vulnerable learners.

In addition to ideas gained from these programs, many ideas were contributed by colleagues and students. Kathy Jungiohann has provided invaluable input from her experience in public school and college classrooms. Gary Davis, Kathy Howe, Elizabeth Jankowski, Mary Damer, and Karen Davis provided input in revisions of chapters for this edition. The following persons made valuable contributions in earlier editions: Vicky Vachon, Carrie Thomas-Beck, Nancy Woolfson, Frank Falco, Mary Gleason, Ramon Alvarez, Linda Canine, Billie Overholser, Conley Overholser, Abby Adams, Anita Archer, Scott Baker, Elain C. Bruner, Vonnie Dicecco, Robert Dixon, Phil Dommies, Jane Dougall, Ruth Falco, Mickey Garrison, Alex Granzin, Tracey Hal, Cheri Hansen, Lisa Howard, Sheri Irwin, Joleen Johnson, Jean Osborn, Mary Rosenbaum, Barak Rosenshine, Sandra Schofield, Marcy Stein, Marilyn Stepnoski, Candy Stevens, and Joan Thormann. Other colleagues provided important support and encouragement, including Barbara Bateman, Wes Becker, Mark Gall, Joe Jenkins, Marty Kaufman, Deb Simmons, and Ruth Waugh.

We sincerely appreciate the assistance of the following people who reviewed the manuscript and provided constructive feedback for changes: Monica Campbell, University of North Carolina, Wilmington;

Elizabeth A. Lasley, Dickinson State University; Linda Lisowski, Elizabeth City State University; and Mary C. Provost, College of Charleston.

CHAPTER

2

A Model of Reading Instruction

(Re-configured and highlighted by Charles Arthur)

Direct instruction has been defined and described in various ways by different professionals across the years. Our current definition is reflected in the description that is presented in Figure 2.1, "What Is Direct Instruction?*" (Schug, Tarver, & Western, 2001). As indicated by that description, our model is highly consistent with the findings of scientific research conducted over the last 50 years. A list of the major research studies and/or reviews conducted during that time appears below:

- Chall's (1967) review of studies comparing the relative effectiveness of whole-word ("look-say") versus phonics approaches to beginning reading instruction.
- The USOE Cooperative Research Program's (1967) review of beginning reading programs (Bond & Dykstra, 1967; Dykstra, 1968)
- Syntheses of Project Follow Through findings regarding reading achievement of students in different educational models (Bereiter & Kurland, 1981-1982; Stebbins et al., 1977)
- A quantitative synthesis of 97 selected studies including 30 different methods (Pflaum, Walberg, Karegianes, & Rasher, 1980)
- *Becoming a Nation of Readers*, a report of the Commission on Reading, produced by the Center for the Study of Reading at the University of Illinois, Urbana-Champaign (1985), under the auspices of the National Academy of Education's Commission on Education and Public Policy, with the sponsorship of the National Institute of Education.
- Rosenshine's reviews of teacher effectiveness variables (Rosenshine, 1979; Rosenshine & Stevens, 1986)
- Adams's (1990) review of research and theories of beginning reading, conducted in conjunction with the Reading Research and Education Center at the Center for the Study of Reading at the University of Illinois, Urbana-Champaign
- The National Reading Panel report (2000).

Because the most recent of the comprehensive reviews, the National Reading Panel review, encompasses the research included in the earlier reviews, we adopted it as the research base for this textbook. However, the other reviews and/or classic studies within reviews will be referenced as appropriate, throughout the book.

Figure 2.1 What Is Direct Instruction?

Direct Instruction is an approach to teaching. It is skills-oriented, and the teaching practices it implies are teacher-directed. It emphasizes the use of small-group, face-to-face instruction by teachers and aides using carefully articulated lessons in which cognitive skills are broken down into small units, sequenced deliberately, and taught explicitly (see Carnine, 2000, p. 5-6; Traub, 1999).

Direct instruction derives mainly from two lines of scholarship and curriculum development. One line of scholarship is based on a synthesis of findings from experimental studies (conducted by many different researchers, working independently, mostly in the 1980s) in which teachers were trained to use particular instructional practices. These practices then were assessed for their effects on student learning, and the effects were compared with effects for similar students who had not been taught according to the experimental method. The synthesis growing out of these studies identified common "teaching functions" abstracted from the experiments that had proved effective in improving student learning. These teaching functions included teaching in small steps with student practice after each step, guiding students during initial practice, and ensuring that all students experienced a high level of successful practice. Instruction of this sort was described variously by the people who used it and discussed it. It was sometimes called systematic teaching, or explicit teaching, or active teaching. In an influential essay, Barak Rosenshine and Robert Stevens (1986) called it direct instruction, and this is the name by which it is now most often known.

As Rosenshine and Stevens describe it, direct instruction is a teaching model, not a particular, fully elaborated program for teaching, say, reading or mathematics. It is abstracted from detailed procedures found, for example, in particular training manuals and materials, and it implies nothing definite about how teachers who make new uses of it might best fulfill the teaching functions it embodies (Rosenshine & Stevens, 1986, p. 389). It is a generic teaching model, in other words—one awaiting subsequent interpretation and development in particular applications.

Interpretation and development of this sort has been provided in a second line of scholarship associated primarily with the work of Siegfried Engelmann and his colleagues. Their work goes beyond the generic direct instruction model, providing detailed teaching programs consistent with its main principles. Engelmann and his colleagues call their programs (by the proper noun) Direct Instruction or DI programs, using upper-case type to distinguish them from the earlier, generic formulations.

The texture of detail in Direct Instruction derives in part from its foundation in close analyses of the comprehension and reasoning skills needed for successful performance in, say, reading or mathematics. These skills provide the intellectual substance of Direct Instruction programs. In the case of reading, it is substance found in the sound system of spoken English and the ways in which English sounds are represented in writing. That is why Direct Instruction is associated with phonemic awareness, or phonics. But Direct Instruction is not the same thing as phonics, or "merely phonics." Direct Instruction can be used to teach things other than phonics—mathematics and logic, for example—and phonics can be taught (as it often has been) by means other than Direct Instruction.

The detailed character of Direct Instruction derives also from a learning theory (Engelmann & Carnine, 1991) and a set of teaching practices linked to that theory. The learning theory focuses on how children generalize from present understanding to understanding of new, untaught examples. This theory informs the sequencing of classroom tasks for children and the means by which teachers lead children through those tasks. The means include a complex system of scripted remarks, questions, and signals, to which children provide individual and choral responses in extended, interactive sessions. Children in Direct Instruction classrooms also do written work in workbook or activity sheets.

Many published instructional programs have made some use of insights from Direct Instruction (or direct instruction). Taken at a high level of generality, at least, those insights are not private property. But Direct Instruction to date is represented most clearly and extensively in instructional programs authored by Engelmann and published by SRA/McGraw-Hill.

When educators talk about adopting Direct Instruction, the programs in question are most likely the Engelmann-authored SRA/McGraw-Hill programs. Other publishers, of course, could enter the market, if they chose to do so, by developing new applications of the underlying direct instruction principles.

The National Reading Panel (NRP) Report (2000)

The NRP was convened in 1997 in response to a congressional directive to review the scientific literature and determine the most effective ways to teach children to read. Leading scientists in reading research, representatives of colleges of education, reading teachers, educational administrators, and parents served on the NRP. The panel identified approximately 100,000 studies published since 1966 and 15,000 studies published before that time. From those studies, they selected for further review the experimental and quasi-experimental studies that met rigorous scientific standards. The panel's conclusions were based on the evidence from those scientific studies.

NRP identified five essential components of effective reading instruction:

- Phonemic awareness instruction
- Phonics instruction
- Fluency instruction
- Vocabulary instruction
- Text comprehension instruction

The NRP report (2000) contains comprehensive reviews of the scientific research within each of the five domains along with succinct summaries of the conclusions drawn from the research. To make this evidence-based reading research available to educators, parents, policy-makers, and others with an interest in helping all people learn to read well, a summarizing document titled Put Reading First (2001) was developed and disseminated. Put Reading First (2001) was published by the Partnership for Reading, a collaborative effort of the National Institute for Literacy, the National Institute of Child Health and Human Development, and the U.S. Department of Education. Put Reading First can be downloaded by going to the National Institute of Literacy website at www.nifl.gov. The complete NRP report can be downloaded or ordered from the NRP website at www.nationalreadingpanel.org. Drawing from the NRP report and Put Reading First, we constructed tables of major conclusions about each of the five essential components of effective instruction. Those tables are included in relevant chapters of this textbook.

The most promising overall conclusion from the NRP report was captured by Duane Alexander, Director of the National Institute of Child Health and Human Development:

For the first time, we now have guidance based on evidence from sound scientific research—on how best to teach children to read . . . the panel's rigorous scientific review identifies the most effective strategies for teaching reading.

Direct-Instruction Model

The direct-instruction model presented in this textbook is a comprehensive model that provides instruction in all five of the essential components identified by the NRP. Subcomponents within each of these major components are specified in the direct instruction model and are described in detail in later chapters.

Most importantly, the direct-instruction model goes further to:

- Sequence the components and subcomponents to produce a seamless progression from beginning to advanced reading skills.
- Specify effective and efficient teaching techniques and procedures to ensure that students acquire components skills and strategies and progress from beginning to advanced reading.

Teaching techniques and procedures employed in the model are described in detail in Chapters 3 and 4. Chapter 3 details the selection of instructional materials and organization of instruction. Chapter 4 details specific techniques and procedures for delivering instruction. The practices described in Chapters 3 and 4 are applied to particular reading components in later chapters. Research that supports the direct instruction techniques and procedures is summarized in Chapters 13 and 27.

Chall's Model of Reading Development

Chall's model of reading development grew out of her seminal research on the effectiveness of different beginning reading approaches (Chall, 1967). In her later book on the Stages of Reading Development (1983), Chall described six stages of development that are entirely consistent with the stages of instruction that constitute the direct-instruction model which we advocate. For that reason, we describe Chall's model briefly here and then discuss important commonalities among her model, the direct-instruction model, and the NRP report.

Stage 0 (up to Age 6)

Stage 0 (up to age 6) is a prereading stage that is characterized by children's growth in knowledge and use of spoken language. Increasing control of words (vocabulary) and syntax is apparent. In addition, children acquire some beginning understandings of the sound structures of words. For example, they learn that some words sound the same at the beginning (alliteration) and/or the end (rhyme), that spoken words can be broken into parts, and that the parts can be put together to form whole words. Most children also acquire some knowledge of print at this stage. They may, for example, learn the names of the letters of the alphabet and learn to print their names and some letters not in their names. Although much of their reading may best be described as "pretend reading," most children do learn to hold the book right-side up and turn the pages. Some may learn to point at a word on the page while saying the word. Reading to children provides them with opportunities to acquire this kind of prereading knowledge.

Stage I (Grades 1-2)

In Stage 1, children learn the letters of the alphabet and the correspondences between the letters and the sounds that they represent. By the end of this stage, they have acquired a general understanding of the spelling-sound system. Direct teaching of decoding accelerates development in Stage I, particularly for those with limited readiness.

Stage 2 (Grades 2-3) In Stage 2, confirmation of what was learned in Stage I takes place and children learn to apply the knowledge gained in Stage 1 to read words and stories. Children learn to recognize words composed of increasingly complex phonic elements and read stories composed of increasingly complex words. Through practice, oral reading of stories and passages becomes more fluent and sounds more like talking.

Stages I and 2 Together Together, Stages I and 2 constitute a "learning to read stage", at the end of which children are no longer glued to the print on the page. They recognize most words automatically and read passages with ease and expression. Decoding the words on the page no longer consumes all of their cognitive attention; cognitive capacity is freed for processing meaning. At this point, children are ready to make the important transition from "learning to read" to "reading to learn."

Stage 3 (Phase A, Grades 4-6; Phase B, Grades 7-8 and/or 9) In Stage 3 children begin to learn new knowledge, information, thoughts, and experiences by reading. Growth in word meanings (vocabulary) and background knowledge are primary goals. Children read selections from an increasingly broad range of materials (e.g., textbooks, magazines, encyclopedias) about an increasingly broad range of topics (e.g., history, geography, science). Most reading is for facts, concepts, or how to do things. In Phase A of Stage 3 when vocabulary and background knowledge are still rather limited, reading is best developed with materials and purposes that focus on one viewpoint. As students move through Phase B, they start to confront different viewpoints and begin to analyze and criticize what they read.

Stage 4 (High School) In Stage 4, students must deal with more than one viewpoint. Topics in textbooks are treated in greater depth and from more than one viewpoint. Dealing with more than one set of facts, competing theories, and multiple interpretations provides not only multiple viewpoints, but knowledge of

how to acquire new points of view and how to acquire increasingly complex concepts. Study skills and practice in efficient reading are beneficial at this stage.

Stage 5 (Age 18 and Above) At this highest stage of reading development, readers can read materials in the degree of detail and completeness that is needed to serve their purposes. Readers select materials to serve their purposes; they know what not to read as well as what to read. They analyze, synthesize, and make judgments about what they read. They balance their own comprehension of the words with their analysis of the content and their own ideas about the topic. At this stage, reading is constructive. The reader constructs knowledge and understanding from reading what others have written.

Chall (1983) attempted to prevent misunderstanding of her model by elaborating the following points:

1. The ages or grades at which the stages occur are approximate.
2. Whether reading develops as described at any given stage depends, to a considerable extent, upon the instruction that is provided in the classroom and/or at home.
3. Development at each stage is dependent upon adequate development at the prior stages. For example, Stage 1 reading is dependent upon the development of language in Stage 0; rhyming, alliteration, and vocabulary are particularly important prerequisites to beginning reading instruction. Reading development in Stage 4 (i.e., critical reading) is dependent upon the acquisition of a rich base of information and vocabulary in Stage 3.
4. The reading stages are not discrete; they are continuous and overlapping. For example, although most spelling-sound correspondences are learned in Stage 1, other more complex correspondences are learned throughout Stages 3 and 4 and perhaps even Stage 5. And, even though fluent passage reading does not become a clear focus of reading development until Stage 2, the rudiments of fluency are developing in Stage 1. Also, although comprehension is not emphasized in Stages 1 and 2, literal comprehension of simple passages is inherent in the development of word recognition skills (Stage 1) and fluency (Stage 2). Although not discrete, each of the stages is associated with particular aspects of development that are of primary importance.

A stage model has important implications for individualization of instruction. Because development at each stage is dependent upon adequate development at the prior stages, it is necessary that educators conduct assessments to determine students' levels of development. Assessments provide the information that will enable educators to provide children with instruction that starts where they are and then build on that base to help children advance to the higher levels. For example, the child who lacks knowledge of rhyming and alliteration (Stage 0) will need some instruction in those skills before moving on to the more formal phonics instruction that is associated with Stage 1. The child who lacks knowledge of most of the letter-sound correspondences will need some instruction in those basic phonics skills before fluency of passage reading is emphasized. The child who has not yet "learned to read" will need instruction in one or more aspects of decoding and fluency before moving on to the "reading to learn" stages. And, similarly, the child who has not acquired sufficient information and vocabulary in Stage 3 will likely have great difficulty when confronted with the need to deal with different viewpoints in Stage 5; explicit teaching of vocabulary and background knowledge will be necessary.

Stanovich (1988) coined the term "Matthew Effect" to describe the educational dilemma that students face throughout their schooling when they are expected to perform at particular levels even though they lack prerequisite knowledge and skills. Children who begin school with little or no phonemic awareness have difficulty learning letter-sound correspondences and therefore have trouble with word recognition. When word recognition places too many demands on cognitive capacity, less cognitive attention is available for allocation to higher-level comprehension processes. Trying to read for meaning without the necessary cognitive resources is not a rewarding experience. Unrewarding early experiences squelch motivation and leads to less involvement in reading-related activities. This lack of involvement, and therefore lack of practice, further delays the development of automatic word recognition. The negative spiral of cumulative disadvantage continues and troublesome emotional side effects begin to be

associated with school experiences. The emotional problems, in turn, present yet another hindrance to school achievement.

In contrast, children who develop efficient decoding processes quickly and easily find reading enjoyable because they can concentrate on the meaning of the text. They read more; the additional exposure and practice further develops their reading abilities. The "Mathew Effect" analogy is used frequently to explain the rich-get-richer and poor-get-poorer effects that are embedded in the educational process. The term derives from the Gospel according to Matthew: "For unto every one that hath shall be given, and he shall have abundance; but from him that hath not shall be taken away even that which he hath."

Congruence of Our Direct- Instruction Model, Chall's Six-Stage Model, and the NRP Report

The direct-instruction model, on which this textbook is based, is highly congruent with both Chall's classic model of reading development and the research-based conclusions of the NRP. Although the terminology used in the three sources differs to some extent, the substance of the instructional implications and practices is essentially the same.

An explanation of some differences in terminology may prevent confusion about the substance of the messages in these three sources. Chall used the global term "development" to describe children's progression through the stages. To some educators, the term "development" connotes an unfolding within the child that is independent of the environmental effects of schooling. It is clear, however, that Chall saw reading development as highly related to methods of teaching beginning reading in school. In both her classic 1967 book, *Learning to Read: The Great Debate*, and her 1983 book, *Stages of Reading Development*, she presented the evidence in favor of a code-emphasis approach in beginning reading instruction and continued throughout her career to expand upon that theme. Our direct-instruction model, like Chall's, is a code-emphasis model. (See Chapter 3 for a definition of what constitutes a code-emphasis approach.) In our direct-instruction model, however, we describe what children learn as they progress in reading as "skills," "knowledge," "concepts," and "strategies" and rarely use the term "development." Our focus is on "instruction" rather than "development."

Chall's 1967 analysis of the research evidence regarding beginning reading instruction is strikingly similar to that of the NRP (2000). Her stages mirror the five components identified by NRP: phonemic awareness (in Stage 0 and into Stage 1 if needed); phonics (emphasized in Stage 1, continued but with less emphasis in the higher stages); fluency (emphasized in Stage 2, continued but with less emphasis in Stage 3); vocabulary (emphasized in Stage 3 and continued throughout Stages 4 and 5); text comprehension (emphasized in Stages 3, 4, and 5, with increasing emphasis on higher-order comprehension at the more advanced stages). Furthermore, both Chall's analysis and the NRP analysis are highly consistent with the analyses of the other review teams listed at the beginning of this chapter. The findings of those review teams will be summarized in a later chapter on Research on Beginning Reading. At this point in time, there is little room for doubt that the components of reading identified by NRP, Chall, and numerous other reviewers are non-negotiable components of reading instruction. Those who value scientifically-based research findings agree, for the most part, on what must be taught when we teach reading. There is less agreement about how to teach the identified components.

Our direct-instruction model encompasses all of the NRP components and emphasizes different components at different times as students progress from naive to mature readers. Furthermore, our model provides all of the advantages of a stage model even though we do not label the model as a stage model in the way that Chall did. In our model, components and subcomponents are sequenced and coordinated very carefully to ensure smooth transitions from phase to phase. Careful coordination of the various components and subcomponents also facilitates application and generalization to a broad range of reading assignments (Kame'enui & Carnine, 1998; Tarver, 2000). Because major changes in emphasis are less evident when instruction is designed to progress smoothly from task to task and from phase to phase, the

progressive nature of our model is not always apparent to the naive educator. Though not readily apparent, this careful sequencing and coordination is a critical feature of our model.

The major difference between our direct-instruction model, Chall's model, other scientifically-based models, and the NRP's instructional recommendations, is this:

We specify in much greater detail both the what and the how of reading instruction. The sequencing and coordination of components (i.e., curriculum design) is the what of instruction. What teachers do to ensure that students really do learn the components as they proceed through the curriculum is the how of instruction.

In the remaining chapters of this book, we describe in great detail the what and the how that we believe to be essential to effective reading instruction.