This text, like the previous editions, is based on an interactive view of ability and disability. Since we first planned and wrote this text, the field has changed significantly in its treatment of reading and writing and in its awareness of the importance of assessing and teaching struggling readers and writers. We are encouraged that some ideas we have espoused for more than twenty years are more visible today. For example, it is now well-accepted practice to use information about students’ instructional program and their success in high-quality first instruction as diagnostic and evaluative indicators. Indeed, the emerging framework for identifying students with learning disabilities—response to intervention (RTI), which we discuss throughout this edition—is premised on the idea that we must monitor students’ progress and achievement in relation to their initial (core) instruction and also subsequent intervention attempts. Similarly, virtually every educator has some appreciation for the importance of continuous assessment to monitor students’ performance and the impact of instruction, and there has been a resurgence of interest in dynamic assessment/diagnostic teaching.

At the same time, some issues that we addressed in the very first edition continue to cause concern. For example, large-scale assessments have begun to re-exert significant influence on decision making to the exclusion of ongoing, more authentic assessments. Although these tools are important, educators should remember to employ multiple measures as they consider student progress and to consider formative assessments as they examine whether a specific literacy program is benefitting groups and individuals. Similarly, the nature of these assessments must be considered with great care. We address these and other concerns throughout the text.

The more careful and extensive discussion of language acquisition, vocabulary development, and early literacy, as well as greater attention to English language learners, that were implemented in the fourth edition are retained in this edition. Additionally, we have continued to focus attention toward adolescent literacy. Finally, information about the RTI process has been tightened and embedded in a more thorough discussion of its role in the assessment-instruction process. We have, of course, updated the information throughout the book.

**NEW TO THIS EDITION**

While retaining these elements from earlier editions, there are a number of dramatic changes in this fifth edition. Two of these are especially notable: (1) a reorientation of the assessment-instruction process and (2) a focus on assessment.

First, we have reoriented the assessment-instruction process to more closely reflect the contexts and processes of contemporary school settings. Assessment is no longer the purview of specialists only, and differentiation and intervention start in the classroom,
not waiting for a comprehensive diagnostic workup. Thus, we start the process in the classroom, where teachers use a wide range of available data to understand groups of students and to identify students who may be at risk for reading difficulties. Chapters 5 and 6 continue to focus on evaluating contextual factors such as methods, materials, and resources. These components are even more critical today because they may be used as part of the assessment consideration for identifying students for specific learning disability. In any event, as we continue through the book, we move from the use of every-pupil data to identify students who are struggling, to progress monitoring data that can refine our information about individual students, to diagnostic information that can inform our instruction/intervention for specific students. Throughout, we use case examples to bring the issues and practices into sharp focus. The case examples of both Kyle and Tha’m are threaded throughout the book, but you will meet other students as well, including Jackson in Chapter 3 and Yasmin, Lionel, and Simon in Chapter 10. These students capture most of the types of reading and/or writing difficulties that educators are likely to encounter.

We continue to believe that the interactive view of reading and writing offers a productive alternative to the deficit view that still dominates textbooks on reading and writing disability. Deficit models suggest that the cause of reading or writing difficulties lies entirely within the reader. Instructional programs based on a deficit model focus primarily on the “search for pathology” within the reader (Sarason & Doris, 1979). In contrast, an interactive view suggests that reading or writing disability is a relative concept, not a static state, and that the difficulty often lies in the match between the learner and the conditions of the learning situation. Extensive research has generated converging evidence to strengthen this perspective (Jenkins et al., 2003; Spear-Swerling & Sternberg, 1998), and additional research suggests strongly that all but a small proportion of struggling readers can learn to read and write well (Scanlon, Anderson, & Sweeney, 2010; Torgesen et al., 2001; Vellutino et al., 1996).

Consistent with an interactive perspective, this text focuses on the process of evaluating the existing match between the learner and the instructional context and identifying an optimal match. The content of this text also reflects our belief that the most important factor in effective assessment and instruction is the knowledge and expertise of the teacher. Accordingly, the first section of the text presents background information regarding reading, writing, and disability.

**Section One, Theory into Practice**, contains two chapters that provide the knowledge base for using the remainder of the text. In Chapter 1, “Perspectives on Reading and Writing Ability,” we describe a historical view and several theoretical views of reading and writing. We also discuss legal and political perspectives on reading and writing and examine the legal and social roots of special education. In this chapter, also, we introduce concepts related to RTI as part of the most recent IDEA reauthorization. Chapter 2, “An Interactive View of Reading and Writing,” details this view, providing a comprehensive picture of the various elements of skilled performance and the factors that influence it.

**Section Two, Getting Started with the Assessment-Instruction Process**, contains two chapters. In Chapter 3, “Reading and Writing Ability and the Assessment-Instruction Process,” we consider different types and purposes of assessment and provide an overview of the assessment-instruction process that is used to guide the remainder of the text.
The case study of Jackson serves as an example. The remaining chapters are organized in a manner that parallels elements of the assessment-instruction process described in Chapter 3. In Chapter 4, “Getting Started,” we use data from a classroom to demonstrate how data can be used to understand groups of students and identify students who may be at risk for reading difficulties. As well, we address important statistical concepts and provide a detailed description of the characteristics and types of tests that are commonly associated with assessment in reading and writing. Examples of screening, monitoring, and diagnostic tests are described and evaluated.

Section Three, Evaluating the Context, contains two chapters on evaluating the reading/writing context. Chapter 5, “Evaluating the Instructional Environment/Context,” is the first of these two chapters. It considers how the overall classroom setting and instructional practices (including instructional goals such as the Common Core State Standards, methods, routines, and assessments) may influence reading and writing performance and provides tools for evaluating these aspects of the context. Chapter 6, “Instructional Resources,” describes how reading and writing performance can be affected by these factors and provides additional tools and strategies for assessing the context.

The next three chapters are contained in Section Four, Evaluating the Learner: Looking More Closely. Chapter 7, “Assessing Young Readers and Writers,” is devoted to an understanding of the language basis for literacy and the assessment and instruction of early literacy concepts, including phonological awareness. Chapter 8, “Structured Inventories and Benchmark Assessments and Progress Monitoring,” provides an in-depth discussion of issues and practices in using information reading inventories (IRIs) and other more systematic assessment tools that are typically used for progress monitoring and/or screening. In Chapter 9, “Formative and Diagnostic Assessment,” we focus on continuous methods of assessing decoding and word recognition, fluency, comprehension, and writing. These tools, more formative and diagnostic in nature, can provide critical information about individual students.

Section Five, Interactions: Assessment as Inquiry, consists of a single chapter, Chapter 10, “Interactive Decision Making,” which emphasizes the juncture where assessment and instruction come together. Here we describe steps in the assessment-instruction process that involve evaluating the match between the learner and the context, reflecting on and generating hypotheses about the source of interference with learning, and identifying an optimal instructional match. We provide extensive discussion of dynamic assessment and diagnostic teaching and multiple examples of how this type of assessment may inform our instruction and intervention. We also reexamine progress monitoring and its pivotal role in continuing to improve instruction and intervention for struggling readers and writers. Finally, this chapter ends with a list of evidence-based instruction and intervention approaches that can be used in working with students whose reading/writing difficulties are more clearly evident as the result of our assessment-instruction process.

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Acknowledgments

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We are grateful to the many individuals who have communicated with us about earlier versions of the text and hope that this revision keeps alive the dialogue. We look forward to our readers’ responses to the challenges presented in this text.

Marjorie Y. Lipson
Karen K. Wixson
In the first section of this book, we provide a theoretical foundation and rationale for the remainder of the text. This section contains three chapters. In Chapter 1, we describe various conceptualizations of reading and writing. We use available theory and research to advance an interactive perspective on reading and writing that lays the foundation for the assessment and instruction process described in the book. In the final part of this chapter, we describe the legal and political aspects of special education and disability and implications for instruction.

In Chapter 2, we discuss the component skills and strategies required to succeed in reading and writing tasks. This chapter may be a review for some students taking a graduate course in assessment and instruction, but the information is essential for teachers and specialists to make sound decisions during assessment and to plan appropriate instruction. In addition, we discuss in detail how learner factors, text factors, and contextual factors interact to influence student performance in reading and writing.
Concerns about reading and writing instruction—and the number of children who are failing to learn—often dominate both public and professional conversation about education. Too often, these issues and what to do about them are argued from personal experience. One person favors a particular approach because it worked for her daughter. Others argue for a different approach because they themselves feel more comfortable with certain practices. Teachers, however, need to base their decisions on a broad base of data, looking for patterns and evidence of efficacy for many students. Sound decision making comes from a combination of personal experience and years of practice, along with information from empirical research, formal case studies, and structured observations.

Good teaching always involves adapting instruction to the needs of specific individuals or groups of students. Such essential adaptations are especially important when we are concerned, as we are in this text, with students who are not learning to read and write easily and well. These students require thoughtfully planned and executed instruction, fitted to their particular needs. What is needed for one “disabled” or struggling learner may be quite different from what is required for another to succeed.

How can we decide what to change, how do we need to adapt existing practice, and how can we help these students who have failed to learn when given exposure to the usual and customary instruction? To make decisions, teachers need to consider theories of learning and teaching, both scholarly and practical. As J. Dewey (1946, 1998) indicated, if you don’t know where you’re going, any road will take you there, but those who teach without theories may follow the road that leads nowhere. In reality, all teachers have some sort of theory, whether they realize it or not. Sometimes called “teacher beliefs” (Anders & Evans, 1994) and sometimes “perspective” (Gutiérrez-Clellen, Pena, & Quinn, 1995), teachers’ theories about reading and writing are extremely important, because the particular theory a teacher holds determines, at least in part, what that teacher does in the name of reading and writing instruction. In fact, Robinson (1998) suggested that teachers generally hold “problem-solving-based theories.” In other words, they ignore some sources of data (e.g., some types of research) if the data do not address the problems they face or the settings in which they work.
In this chapter, we describe the ways in which existing views of reading and writing have influenced both assessment and instruction over the years and provide information that will help you refine your own theories of reading and writing. In addition, we trace the legal and political roots of programs designed to address the needs of students with reading and writing difficulties. These various perspectives help teachers reflect on their existing knowledge and beliefs, setting the stage for a more extensive discussion in Chapter 2 of an interactive view of reading and writing.

**UNDERSTANDING READING AND WRITING**

In this section, we describe the historical contexts in which reading and writing came to be viewed separately in education in the United States. This is followed by a discussion of more-recent cognitive and social perspectives that have resulted in added integration of reading and writing in educational theory and practice.

**Historical Perspectives on Reading and Writing**

The field of literacy education as we know it today began as reading instruction in the public school at the primary grade levels. Public schooling was seen as a way to provide a growing population with the foundations of good citizenship, and reading was the way for students to acquire common moral and political principles. The first public schools of the mid-nineteenth century gave instruction in reading brief biblical passages and other moralistic texts; later, primers offered secular patriotic readings with questions and answers for students to copy and recite (Clifford, 1984; Squire, 1991).

Writing at that time was considered less important than oral communication, because most citizens of the new nation had no need to write except to sign their names. Like reading, writing was thought to be a simple matter—a way to put into print words that would otherwise be spoken. All students needed to know for that simple translation was handwriting and spelling (Clifford, 1984; Russell, 1991).

After the Civil War, the growing commercial and professional class was divided into many separate communities. These communities were linked more by written texts—such as memos, reports, professional literature, and administrative records—than by geography or social class (Russell, 1991). The new professionals demanded that schools provide their children an education that would prepare them for roles in government, commerce, and the growing professions. The purposes for school literacy instruction expanded to serve the general population as well as the college-bound elite (Katz, 1987; Russell, 1991).

In 1894 a committee composed of university professors, professionals, and businessmen issued the Report of the Committee of Ten on public high schools. The report called for greater emphasis on English literature, because literature was seen as a vehicle for transmitting common values and “uplifting” ordinary citizens (Applebee, 1974). Following this report, a National Conference on College Entrance Requirements produced a list of core readings—a literary canon that dominated the entire high school English curriculum for decades (Applebee, 1974).
The Committee of Ten also set standards for written expression that were accepted throughout the country (Heath, 1991; Russell, 1991). As a result, schools and other public institutions began emphasizing standard English in writing as well as speaking; correct spelling and grammar thus became a focus of instruction. Classroom writing activities typically consisted of copying texts, underlining, circling, and supplying one-word responses (Clifford, 1989; North, 1987). Graded reading books that matched children’s age and ability level, first printed in 1836, became the norm by the late 1800s and established the pattern for the basal reading series still used today (Squire, 1991).

From the mid-1800s through the first decades of the twentieth century, a progressive philosophy of education gained influence among educators. The foremost progressive philosopher of education, John Dewey, advocated a public school system that functioned neither to preserve privileged traditions nor to prepare students for prevailing social conditions, but rather to improve students’ lives and create a society whose benefits accrued to all citizens (Applebee, 1974; Cremin, 1989). Dewey rejected the literary canon and instead recommended curriculum materials that had relevance to students. He promoted cooperation and group work in the classroom to encourage a free exchange of ideas and saw schools as learning communities (Applebee, 1974; Hendley, 1986; Russell, 1991).

The scientific movement arose as a counterinfluence on schools during the progressive era. One of the early educational psychologists, Edward Thorndike, developed scientific theories that led to the development of objective measures of student achievement. These measures were used to sort students into ability groups so that teachers could provide instruction suited to particular needs. This movement came to exert the same control that the literary canon once had on curriculum and instruction in the form of skills instruction.

In the last forty years, our understanding of how students learn and our approach to studying reading and writing have changed rather dramatically as a result of two newer ways of thinking about teaching and learning: the cognitive revolution and the “social turn” (Geertz, 1983). These two perspectives, described more fully in the next section, are important because they prompted researchers and educators to consider reading and writing together, rather than separately. In addition, they are the basis for the interactive view described in this text. In describing these perspectives, we are greatly indebted to the thinking of Hiebert and Raphael (1996), McCarthey and Raphael (1992), and Englert and Palincsar (1991).

### Cognitive Information-Processing Perspectives on Reading and Writing

During the World War II period, computer technology suggested new ways to model mental processes that influenced our views of learning. The new cognitive scientists viewed computers and the mind as similar: active, self-monitoring systems for processing information. Information-processing theories have been used to develop several models of both reading and writing processes (for example, Gough, 1972; Hayes & Flower, 1980; Kintsch & van Dijk, 1978; LaBerge & Samuels, 1974).

When an information-processing perspective is applied to reading and writing, three assumptions seem to operate: (1) reading and writing comprise a number of subprocesses used to perform specialized tasks; (2) readers and writers have limited capacity for
attention so that trade-offs occur across the subprocesses; and (3) competence in reading and writing is determined by the degree of attention needed to operate subprocesses—i.e., the less memory needed, the more efficient the operation (McCarthey & Raphael, 1992).

Like the computer whose components perform specialized functions that interact to complete a task, information-processing models divide reading and writing processes into subprocesses, each with a different function. For example, Gough (1972) proposed a model of reading as a linear, hierarchical process. The reader works from the smallest units of analysis (letters) to the largest (text meaning), and each level of analysis triggers the next, with the sum of these analyses adding up to meaning.

In contrast, LaBerge and Samuels (1974) described reading in terms of the component processes that relate to the functions of different types of memory: visual, phonological, semantic, and episodic. At the heart of their model is attention, the process that allocates the reader’s efforts to the subprocess or memory type needed for the task at hand. In this view, progress through the subprocesses may not be linear, because attention may be allocated to different memories in different patterns.

The information-processing perspective also includes interactive models (e.g., Rumelhart, 1977). Interactive models suggest that the processing of text is a flexible interaction among the different information sources available to the reader and that the information contained in “higher” stages of processing can influence, as well as be influenced by, the analysis that occurs at lower stages of analysis.

Information-processing models of writing are similar to those of reading. For example, Flower and Hayes (1981) described writing as consisting of three recursive phases: planning, in which writers set goals and make plans; translating, in which writers put ideas into written form; and reviewing, in which writers test the plans and translations. Similarly, Scardamalia, Bereiter, and Goelman (1982) distinguish between metacomponents, used to identify choices and make decisions, and performance components that allow writers to carry out their plans. Although these models differ in the division of tasks and specific definitions of the writing process, they share an emphasis on dividing the process into smaller components for analysis and description.

Information-processing theorists also use the computer metaphor to describe the limited capacity of readers and writers, who must often juggle several subprocesses at once (accessing background knowledge, organizing ideas, making decisions about relevant and redundant information, and monitoring). Just as the computer cannot attend to everything at once, humans also have limitations on their processing capacities. The cognitive juggling required for successful reading and writing performance is explained in terms of how much attention is actually necessary to engage in a given activity and how effectively individuals switch their attention to the process most useful for a particular task.

The term *automaticity* has been used to describe the way skilled readers’ subprocesses operate as instinctive routines (LaBerge & Samuels, 1974). Initially, subprocesses such as decoding in reading and handwriting in composition demand so much of our attentional resources that higher-level processes cannot be employed. Eventually, however, lower-level subprocesses are mastered to the point of automaticity, and then new routines can be learned. Although not all subprocesses become automatic (comprehension and planning always involve some conscious attention), the more that do become automatic, the better able the reader or writer is to attend to more cognitively demanding activities.
Cognitive scientists investigating reading and writing can roughly be divided into those who adhere to an information-processing model of cognition and those adhering to the more recent constructivist model of cognition. The former conceptualize meaning as being transported from author to reader (e.g., Hiebert & Raphael, 1996); the latter (e.g., R. C. Anderson, 1977; Bransford, 1979; A. L. Brown, 1978) see meaning as being constructed by the reader based on information the reader already possesses (the reader’s schema) and the information provided by the text. The constructivist view fits well with the social perspectives we are about to describe, and together they constitute what is known as a sociocognitive view of reading and writing.

**Implications.** Information-processing models and research provide us with an increased understanding of reading and writing processes in terms of their components. These models, also provide a better understanding of the knowledge base of skilled readers and writers. However, most information-processing models do not account for the variability that occurs in reading and writing as a result of a host of contextual factors such as the nature of the task, goals, purposes, and instruction. They also tend to overlook or dismiss larger social and cultural factors that influence an individual’s reading and writing performance.

There has been little effort to detail the specific links between reading and writing from within the information-processing perspective. Although there is some research from this perspective that deals with how reading and writing may be related (for example, Ehri, 1989; Shanahan & Lomax, 1986), information-processing theory sheds little light on how to encourage their development or on how less-successful or novice readers and writers become more skilled.

**Social Perspectives on Reading and Writing**

Recent social theories of language and learning suggest that meaning is not an individual construction, but a social negotiation that depends on supportive interaction and shared use of language. The assumptions underlying various social perspectives on reading and writing are quite different from those described above: (1) reading and writing are social and cultural phenomena; (2) knowledge is constructed through the individual’s interaction with the sociocultural environment; and (3) cognitive processes related to reading and writing are acquired through contextualized activity and assisted learning (Englert & Palincsar, 1991; McCarthey & Raphael, 1992).

**Sociocultural Nature of Reading and Writing.** The societies or cultures within which we live, learn, and work determine how reading and writing are defined, instructed, and evaluated. For example, at the district level, curriculum decisions such as the choice of guided reading approaches versus structured basal reading programs influence the instructional and assessment practices of teachers.

At the school level, the principal’s and teachers’ beliefs about learning and teaching have an effect on practices that determine, for example, the extent to which diverse groups of students are accorded equal opportunities to learn. Culture also manifests itself in classrooms in the form of patterns of social interactions and the sets of rules or routines that guide teachers’ and students’ social exchanges. These routines develop in the participants...
shared understandings about what it means to read and write, what “counts” as reading and writing, and appropriate uses of reading and writing (Dyson, 1999; Miller & Gadnow, 1995; Rogoff, 1990).

According to sociocultural theorists, the oral and written texts that students produce don’t stand alone. Instead, they must be seen as related to all the activity and experience that have gone before with that teacher and classroom. Books have been read, ideas have been exchanged, and social interactions have occurred, all of which influence the types of oral and written exchanges that happen subsequently (Cole, 1990).

Viewing reading and writing in terms of cultural practices means that we must understand the political and social, as well as cognitive, dimensions of literacy. When the classroom is viewed as a culture, we must be concerned with teachers’ and students’ beliefs about reading and writing, and the patterns of interactions occurring among students and between teachers and students, rather than with discrete activities. We must consider factors such as the ways in which reading and writing are represented to students and the occasions students have to participate as readers and writers within the classroom culture.

Knowledge Construction through Interaction. The social perspective on learning asserts that learning to think, read, and write are not individual, independent activities. Instead, the acquisition of such functions begins with the interactions of parent and child, among siblings and peers, or between teacher and students. The role of language and dialogue is critical, because it is through speech and social interaction that the learner acquires abilities such as reading and writing (Vygotsky, 1986).

Vygotsky (1978) proposed that from the early stages of development, people are involved in fundamentally social processes such as communication; later, in a schooling context, these processes are jointly performed and constructed by teachers and students as they cooperatively engage in dialogue. Processes that begin as social and shared become internalized in a second phase. In this phase, students’ performance is assisted by their own vocalized self-talk; social speech becomes internalized as egocentric speech.

Finally, in a third phase, the self-directing speech of the learner goes underground as it becomes “inner speech.” At this point, learners do not overtly vocalize or self-instruct, although self-talk may surface as the difficulty of the task increases. Learners do not simply take in information; they continually construct new, more complex meanings as they transform knowledge for application across a broad range of activities.

Contextualized Activity and Assisted Learning. Vygotsky (1978) suggested that cognitive processes are best understood as context specific and learned through practical activity. This implies that reading and writing instruction must engage students at all ability levels as participants in contextualized, authentic, and holistic activities. Vygotsky (1978) proposed that the difference between what a child can do alone and what he or she can do with the assistance of a more capable other represents the “zone of proximal development” (ZPD) in which instruction should occur. The concept of the ZPD assumes that a deliberate transfer of control from the more knowledgeable to the less knowledgeable person takes place.

How the adult or more knowledgeable person assists the student in taking control of a process is integral to social views of learning. Assisted learning and instruction have
been compared to a scaffold, in that it provides support but is also temporary and adjustable (Palincsar, 1984; Wood, Bruner, & Ross, 1976). This educational scaffolding involves structuring tasks through modeling, explaining, questioning, and feedback until the learner can operate independently and is essential to learning in a social view of reading and writing.

**Implications.** Social perspectives on reading and writing address a number of the weaknesses identified in cognitive models. Specifically, they account for variations among cultures in literacy practices and in the ways students learn to read and write in different settings. They highlight the role of social context and bring our attention to the need to be sensitive to the values and practices of different cultural groups in schools. In addition, the focus on language as a cultural tool helps us understand how new learning is acquired and how important it is in developing new instructional strategies (McCarthey & Raphael, 1992).

Social perspectives emphasize that reading and writing are connected through their uses within the culture and through the role dialogue plays in the development of literacy. Although there is research on issues related to the role of culture in literacy practices and in cognition, little research has been done on the connections between reading and writing from this perspective. Although variable within the range of social perspectives, some do offer insight into literacy development and instructional practices that support increased learning among less-skilled readers and writers.

**An Interactive Perspective on Reading and Writing**

The interactive perspective on reading and writing described in this book is an amalgam of the cognitive information-processing and social views. It rests on several assumptions: (1) reading and writing are processes of constructing meaning; (2) the construction of meaning results from an interaction between the reader/writer and the context of the reading/writing situation; and (3) the interaction is dynamic, or variable, as a function of numerous reader/writer and contextual factors (see Figure 1.1). Meaning, in the form of skilled reading and writing performance, is generated from the interaction between the learner and the reading/writing context, and there are many factors that influence learners’ ability to comprehend and compose. A general discussion of this perspective is provided below.

**Construction of Meaning in Reading and Writing.** The interactive view acknowledges how development in reading and development in writing are interrelated. At both the word level (Bear & Templeton, 1998) and the discourse level (Tierney, 1992), writing informs reading and vice versa. An interactive perspective suggests that readers construct meaning when they comprehend in much the same way writers construct meaning when they compose. Meaning is created in the mind of the reader/writer as a function of the interplay between the cognitive information-processing abilities of individuals and the context of the reading and/or writing event. As with the sociocultural perspective, skilled performance is viewed as the ability to use reading and writing for personal, recreational, academic, and civic purposes.
Interactions. The interactive view argues that both cognitive processes and socio-cultural aspects of context influence reading and writing processes and performance. Reader/writer factors that affect reading and writing performance and processes include prior knowledge of content, knowledge about reading and writing processes, and attitudes and motivation. Context factors include the setting for learning, the reading and writing curriculum, and the instructional methods, materials, and tasks employed. Each of these factors has been shown to affect how people approach reading and writing tasks and also how well they perform.

Dynamic Interactions. The term dynamic is used to indicate that reading and writing are variable processes, adapting to the specific demands of each particular reading/writing experience. Reading and writing ability are relative properties, not stable, static constructs. Each person may have a range of reading and writing abilities, depending on texts, tasks, and contexts. For example, we may be very good at writing friendly letters but do poorly at writing research papers, or we may devour romance novels with good comprehension but shudder at the thought of reading a book about the latest breakthroughs in physics.
Implications. An interactive perspective offers the most useful insights for educators working with less-skilled readers and writers. Indeed, Frankel, Pearson, and Nair (2011) have argued that it provides “the broadest possible framework for conceptualizing disability and pointing toward appropriate instructional interventions” (p. 222). From this perspective, the variability within and across individuals means that reading and writing performance is a function of what learners can and will do at any given moment. Appropriate instruction requires that we understand the variability that exists within and across individual learners. Issues of linguistic background, motivation, and/or cultural understanding and values are each as relevant as whether the learner can read sight words or understand punctuation. Instruction that takes these issues into account focuses on providing students with a rich and diverse selection of materials and opportunities for ample self-selection during both reading and writing. It also provides students opportunities to read and write for many different purposes.

UNDERSTANDING THE LEGAL AND POLITICAL ASPECTS OF READING AND WRITING

In this section, we turn away from theoretical perspectives and toward legal and political perspectives on the acquisition of literacy among students who are struggling. Reading has become a major topic of conversation and action in the political arena, with the initial emphasis on early reading expanding to an interest in adolescent literacy. The influence of policy on practice—at local, state, and national levels—has never been greater, and we examine here some of the activity surrounding these issues. In addition, because they influence literacy instruction so strongly, we consider the legal and social basis for present-day special education programs and describe the specific provisions for meeting existing legal requirements in that arena.

EDUCATIONAL REFORM, READING, AND LITERACY

Reading and literacy are at the heart of some of the most controversial debates about education. People care about how well students read and write. Some care about it because they are particularly concerned about reading and writing as the basis for most other learning. Others care about it because they view it as a general indicator of the health of public schools. Finally, some care about it because the methods of instruction may be emblematic of philosophical or personal orientations toward larger issues such as student-centered versus curriculum-centered learning.

We cannot, of course, take on all of these issues in this book. However, we cannot avoid them either. Many theoretical and pedagogical arguments are not new (see Lemann, 1997, and Mathews, 1966, for a discussion of the “reading wars”). Certainly, old arguments have been resurrected in the current debate. However, the contemporary version of the debate is also an argument about which knowledge counts (and to whom) and also about who will decide what counts.
To an extraordinary extent, the current debates are being conducted in state houses, legislative meeting rooms, and the halls of Congress. "This modern reform movement has been characterized by efforts to create new ‘policy instruments’ to elicit, encourage, or demand changes in teaching and learning" (Valencia & Wixson, 2000, p. 909). Whether by means of mandated assessments and standards, or teacher preparation requirements, teachers and teacher educators find their ability to make decisions influenced or constrained (see Lipson, Mosenthal, Daniels, & Woodside-Jiron, 2000; McGill-Franzen, 2000; Valencia & Wixson, 2004).

The attention given reading and writing policies and practices can have the positive effect of creating more-coherent programs, providing support for less-skilled and knowledgeable teachers, and helping everyone to gain clarity about a state or community’s shared goals. Depending on how policy is developed and implemented, it can also have the less positive effect of creating divisions among educators, promoting cynicism and distrust among the public, and calling into question the motives of the participants.

If they did not know this before, most teachers now understand that policies and practices can make a very big difference in the choices they have available to them. Political forays might seem distant from the classroom and from our work with individual students who are having reading difficulties. However, they do affect instruction at all levels in significant ways. Under the No Child Left Behind Act (NCLB) of 2001, there is a mandate for all states to have aligned standards and tests. NCLB has also increased testing accountability by requiring states to administer annual reading and mathematics assessments in grades 3 through 8. State assessments are referred to as “high-stakes” tests because they have significant consequences for districts, schools, administrations, teachers, and students. Administrators and teachers can be rewarded or punished based on student performance on these tests, which can also be used to determine if students are retained or fail to graduate from high school. Many individuals and groups have expressed concerns about high-stakes testing, such as those in a position statement adopted by the Board of Directors of the International Reading Association (IRA, May 1999). The IRA position states a particular concern that “testing has become a means of controlling instruction as opposed to a way of gathering information to help students become better readers” and calls for “the evaluation of the impact of current types and levels of testing on teaching quality, student motivation, educational policy making, and the public’s perception of the quality of schooling” (IRA, May 1999, p. 1).

NCLB has also influenced the nature of the programs or practices used to teach reading, primarily through its Reading First initiative. Commercial publishers shape their programs to accommodate both the intellectual and political debates. Teachers might find that they must use a particular program to teach a specifically mandated component of reading using a predetermined methodology similarly mandated. Tests that assess only limited aspects of reading competence encourage teachers to address a narrower range of reading behaviors.

In short, the policy perspective has moved into a central spot, governing (directly and indirectly) the decisions that teachers make every day. Debates continue about what types of text to use, whether students should be grouped or not, whether skills or literature should be taught, and whether to teach explicitly or implicitly. Over the years, these debates have triggered several significant attempts to specify the instructional imperatives for teaching...
reading. One of the earliest efforts in the recent past was initiated by the National Academy of Sciences, which created a Committee on the Prevention of Reading Difficulties and charged the committee to synthesize research on early reading and reading difficulties. In 1998, this prestigious group published *Preventing Reading Difficulties (PRD)* (Snow, Burns, & Griffin, 1998).

Shortly following the PRD report, Congress charged the director of the National Institute of Child Health and Human Development and the Secretary of Education to establish a panel of experts to synthesize and summarize the research-based knowledge related to teaching children to read. The charge was controversial, largely because it conceived of research so narrowly that it excluded a large amount of worthwhile literacy research and limited the usefulness of the findings for classroom teachers. The resulting document, *Teaching Children to Read: An Evidence-Based Assessment of Scientific Research and Its Implications for Reading Instruction* (National Reading Panel [nRP], 2000) was released amid significant debate (see, e.g., Garan, 2001; Shanahan, 2001). Despite the criticisms, the NRP report played a key role in federal reading policy and in establishing current reading standards and practices, primarily through the policies associated with the Reading First initiative (Wixson, Dutro, & Athan, 2004).

Following the attention to early reading came increased interest in reading comprehension and adolescent literacy. Attention to reading comprehension began with a research agenda-setting effort established by the U.S. Department of Education and managed by the RAND Corporation, which resulted in a volume entitled *Reading for Understanding: Toward an R&D Program in Reading Comprehension* (RAND, 2002), otherwise known as the RAND report. This report provided the impetus for the U.S. Department of Education’s Office of Educational Research and Improvement (now the Institute for Educational Sciences, or IES) to create a new program of research on reading comprehension. Most recently, attention has moved toward comprehension in the middle and secondary schools, as reflected in the report entitled *Reading Next* (Biancarosa & Snow, 2004). The foreword to this report acknowledges that the country’s attention to reading in the primary grades, described as “word recognition,” has neglected “the core of reading: comprehension, learning while reading, reading in the content areas, and reading in the service of secondary or higher education. . . .” and that “. . . many excellent third-grade readers will falter or fail in later-grade academic tasks if the teaching of reading is neglected in the middle and secondary grades” (p. 1). This report delineates fifteen elements aimed at improving middle and high school literacy achievement, and calls on the funding, research, policy-making, and education communities to embrace “these recommendations in an effort to meet the needs of all students in our society, while also strengthening our understanding of exactly what works, when, and for whom. We will hereby strengthen the chances for striving readers to graduate from high school as strong, independent learners prepared to take on the multiple challenges of life in a global economy” (p. 5). Shortly following the release of Reading Next, the U.S. Department of Education announced its Striving Readers grant program, which made its first awards in 2006. The goals of this program are threefold: (1) to enhance the overall level of reading achievement in middle and high schools through improvements in the quality of literacy instruction across the curriculum, (2) to improve the literacy skills of struggling adolescent readers, and (3) to help build a strong scientific research base around specific strategies that improve adolescent literacy skills.
The most recent entry into the long line of reports and policy documents is the Common Core State Standards in English Language Arts (CCSS-ELA), released in June 2010 by the Council of Chief State School Officers (CCSSO) and the National Governors Association (NGA). Largely as a result of the tremendous variability across states with regard to standards, assessments, and proficiency criteria, there are renewed efforts to bring coherence to state standards and assessments in reading and mathematics. At this writing, forty-five states plus the District of Columbia have adopted the CCSS, and a similar number of states have joined together in two consortia to develop new state assessments aligned with the CCSS for implementation in 2014–2015.

Throughout this book we describe more fully our own interactive perspective, one that we believe successfully accounts for a wide array of research findings and provides a place in the dialogue for a perspective that honors both the findings of research and the diverse contexts of teaching and learning in U.S. schools.

LEGAL AND SOCIAL ROOTS OF SPECIAL EDUCATION

During the 1950s and 1960s, a combination of social and political factors combined to create an environment in which unusual and extensive attention was focused on students who were failing to learn easily and well in the public schools of the United States. National attention was captured by a series of legal battles initiated by a group of advocates who wanted to see that all students received appropriate public education.

One such legal battle was *PARC v. Commonwealth of Pennsylvania* (1971), in which the court concluded that students had been excluded or excused from attendance in public schools simply because they were disabled and ordered the state to support public education for such students. As a result, any school-age child, no matter how impaired, was eligible to receive a free, appropriate public education for the first time in history.

Access to public education was only one of the problems confronting the field at that time, however. The practices surrounding testing and labeling students were suspect for many reasons. For minority students, the problems of abuses and inadequate protections were particularly apparent. Two other cases were directly related to practices in these areas. The decisions handed down by the court in *Diana v. Board of Education* (1970) and *Larry P. v. Riles* (which started in 1971 and concluded in 1979) required that the state of California test students in their primary language, reevaluate students from minority groups (African Americans, Latinos, and Asians) currently in classes for the mentally retarded, and develop and standardize IQ tests appropriate for minority groups.

A final concern among advocates in the area of special education involved the treatment and instruction provided to handicapped individuals once they were placed in specialized institutional settings. In two cases, *Wyatt v. Stickney* and *New York ARC v. Rockefeller*, judges ruled that residents of such placements had the right to appropriate treatment, and in the *Wyatt* case, the judge specified that this treatment should occur in the least restrictive environment.

The active round of legal rulings prompted both attention and concern and provided the basis for the legislative initiatives to follow. Beginning in the early 1960s, laws were passed that established federal programs related to service, training, and
research designed specifically for the handicapped. These legislative actions culminated with the passage of Section 504 of the Rehabilitation Act of 1973 and the Education for All Handicapped Act (PL 94-142) in 1975. Replaced by the Individuals with Disabilities Education Act (PL 101-476, or IDEA) in 1990, it was further amended in 1997 (PL 105-17) and again in 2004 (PL 108-446). Taken together, these legislative actions define disability; describe the identification of students and the planning of instructional programs; and guide decisions about procedures for identification of, placement of, and programs for students with special needs.

Although Section 504 was actually passed before the other legislation, the regulations came out several years later, and many schools were slow to adopt the provisions of Section 504. On the other hand, all schools are well aware of the provisions of IDEA, which mandates the following:

- The right to education—all handicapped children are to be provided with free, appropriate public education
- The right to nondiscriminatory evaluation
- The right to an IEP (Individualized Education Plan)—a clear statement of objectives for each child, along with documentation of the child’s current and expected performance
- The right to education in the least restrictive environment
- The right to due process
- The right of parental participation (Gallagher, 1984)

**Special Education Identification**

The actual procedures for implementing the mandates of IDEA vary somewhat from community to community, but the process must include provisions for meeting each mandate. Practically speaking, a teacher, administrator, or parent may make an initial referral for the purposes of determining whether a student is entitled to special education services. Following this referral, the child’s parents must be fully informed about the prospective assessment process and permission to proceed must be received from them. Only after these stages have been completed are assessment procedures initiated to determine whether the student meets federal and local guidelines for exceptionality. In addition, the assessment is usually designed to determine the category of handicap that will be used for purposes of classification. For students identified as having a specific learning disability, the primary determining factor has been a discrepancy between their measured achievement and intellectual ability.

IDEA 1997 clearly specifies procedures for the assessment phase. The procedures designed to address the mandate that students have “the right to nondiscriminatory evaluation” are as follows:

- Tests must be selected and administered so as to ensure that results “accurately reflect the child’s aptitude and achievement . . . rather than reflecting the child’s impaired sensory, manual, or speaking skills.”
No single testing procedure may be used for determining an appropriate educational program for the child.

The evaluation must be conducted by a multidisciplinary team.

The child must be assessed in all areas related to health, vision, hearing, social and emotional status, academic performance, communicative status, and motor abilities. (See IDEA 1997 Regulations, C.F.R. § 300.532.)

In addition, the law provides guidelines for the types of assessment instruments that may be used, stating that tests and other evaluation materials

- should be provided and administered in the child’s native language;
- should have been validated for the specific purpose for which they are used;
- should be administered by trained personnel; and
- should include materials tailored to assess specific areas of educational need and not merely those that are designed to provide a single general intelligence quotient. (See IDEA 1997 Regulations, C.F.R. § 300.532.)

When the assessment phase is completed, IDEA 1997 states clearly that there will be a meeting to develop the child’s individualized education plan (IEP). As was previously noted, the IEP is mandated by the federal government and requires a clear statement of objectives for each child, along with documentation of the child’s current and expected performance. In addition, the IEP must contain a statement that specifies who will be responsible for each component of the plan and ensures periodic reevaluation of the child’s status.

IDEA 1997 regulations require that the multidisciplinary team involved in developing the IEP must include a public education representative who is qualified to provide or supervise the provision of special education, a regular education teacher, the child’s teacher, one or both of the child’s parents, the child where applicable, and other individuals at the discretion of the parent or agency (see IDEA Regulations, C.F.R. § 300.344 [1977]).

The parent(s) must agree to the designation of the child under a particular handicapping condition and to the information provided in the IEP. If the parents do not agree with the recommendations of the team, a series of legal procedures are set in motion to settle the disagreement.

When IDEA was reauthorized in 2004, it included a new approach for determining eligibility for learning disability services. This law indicates that schools will not be required to take into consideration whether a student has a severe discrepancy between achievement and intellectual ability. Rather, they may use a process called response to intervention (RTI) that determines if the student responds to scientific, research-based interventions as part of the evaluation process. After receiving one or more such interventions, students who do not demonstrate adequate progress are then considered for an evaluation for a specific learning disability. According to a white paper by the National Association of State Directors of Special Education (NASDSE) and the Council of Administrators of Special Education (CASE), RTI builds on recommendations made by the President’s Commission on Excellence in Special Education (2002) that children with disabilities should first be considered general education students and that special education should embrace a model of prevention as opposed to a model of failure (NASDSE/CASE, 2006).
Although some have been quick to instantiate the RTI concept with a particular, special education–oriented three-tier model, others have provided a broader perspective. For example, the NASDSE/CASE (2006) white paper stresses that, while RTI has been given a boost by IDEA 2004, “it is first and foremost, a strategy to be used in the general educational classroom” (p. 2). In addition, a paper on RTI by the National Joint Committee on Learning Disabilities (NJCLD), an organization representing eleven national and international organizations, emphasizes that there is no universally accepted model or approach to RTI and that many possible variations can be conceptualized (NJCLD, 2005).

More recently, the International Reading Association’s Commission on RTI published a set of Guiding Principles for educators (IRA, 2009), with a particular focus on issues for professionals in the areas related to language and literacy education. These principles characterize RTI as a comprehensive, systemic approach to teaching and learning designed to address learning problems for all students through increasingly differentiated and intensified assessment and instruction. These principles emphasize the need for highly qualified professionals with appropriate expertise to deliver instruction. From this perspective, RTI is a process that cuts across general, compensatory, and special education, and is not exclusively a general or special education initiative. Similarly, it is not simply a prereferral process that must be carried out before students are identified as learning disabled. Carefully selected assessment and differentiated instruction, quality professional development, and genuine collaboration across teachers, specialists, administrators, and parents are among the factors described as important for the success of RTI.

**Students with Disabilities**

According to IDEA, a student’s eligibility for special education services is determined by the type and degree of deficit in a particular area, following the guidelines developed through legal and judicial channels. There are currently nine categories of special needs:

1. Mental impairment
2. Hearing impairment
3. Visual impairment
4. Speech impairment
5. Orthopedic impairment
6. Other health impairments (limited vitality, strength, or alertness due to chronic or acute health problems)
7. Multiply handicapped
8. Serious emotional impairment
9. Specific learning disability

In most respects, the procedures and practical implications for students and schools are the same across IDEA and Section 504. All students who are eligible for special services under IDEA are also eligible for the protections of Section 504. However, Section 504 has a broader definition for eligibility, and some students may be eligible under Section 504 who would not meet the criteria for services under IDEA. Any student whose disability “substantially limits a major life activity or is regarded as a handicap by others”
may be eligible. Thus, students with certain medical conditions (e.g., asthma, allergies, communicable diseases) or students with attention deficit hyperactivity disorder, behavior problems, or drug or alcohol problems may require support under Section 504.

Eligibility for children in many categories is established early and unequivocally, because many handicapping conditions are apparent prior to a student’s entrance into school. However, learning disability and the less-severe cases of mental and emotional impairment are often identified after a student has entered school and failed to meet certain academic expectations.

Reading and writing personnel are often involved with students who have been identified as having special needs in the area of learning disability, because the referral is frequently made on the basis of a student’s academic performance in the area of reading and writing. “Over 75–80% of school-age students with mild disabilities (i.e., learning disabilities, mild mental retardation, emotional disturbance, and behavioral disorders) experience significant problems in basic language and reading skills (Ellis & Cramer, 1994)” (quoted in Gaffney & Anderson, 2000, p. 71). Learning-disabled students currently account for approximately half of the children served through special education programs (U.S. Department of Education, 2002).

Learning disability is defined by the federal government in the following manner:

“Specific learning disability” means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage. (Federal Register, Dec. 29, 1977, p. 65083)

It is important to understand how learning disability is related to other controversial issues surrounding reading and writing disability. For example, the similarity between the definition of learning disability and that of dyslexia offered by the World Federation of Neurology has not been lost on most educators:

[Dyslexia] is a disorder manifested by difficulty in learning to read despite conventional instruction, adequate intelligence, and sociocultural opportunity. It is dependent upon fundamental cognitive disabilities which are frequently of constitutional origin. (Critchley, 1975)

These definitions suggest that for all practical purposes learning disability and dyslexia are synonymous. What is most important is that both definitions clearly imply either a medical or nonspecified etiology within the learner. As Spear-Swerling and Sternberg (1998) note, this intrinsic perspective has dominated the field of reading and learning disability for many decades. In this view, the students’ difficulties are seen as internal and intrinsic to the learner. The extrinsic perspective—drawing attention to the quality and nature of school experiences, poverty rate, or linguistic variations—has never taken root in the special education literature. The interactive view has only recently generated interest among educators and researchers in that field.
Impact on Practice

Although it may appear that special education determinations are straightforward, they are generally far from clear-cut. In addition, schools throughout the country are struggling to decide what programs to offer, who should deliver instruction, and who is eligible for various special programs. For reading and writing professionals and for students who need help in reading and writing, these issues can be troublesome. More than any other classification of handicap, that of learning disabilities has revived discussion about the source of disability. In the process, troubling sociological issues have been raised as well.

Initially, the “learning disability” category was most likely to be used in identifying affluent and middle-class students. As a result, these students received federally mandated support through special education. Disadvantaged students and those from diverse backgrounds were more likely to receive support (when they received any additional help at all) from the nonmandated compensatory education system.

The Elementary and Secondary Education Act (ESEA) was originally passed in 1965 and was conceived as a program to provide additional educational assistance (compensatory education) to schools with large numbers of low-income families. It has been revised and reauthorized several times since then, and continues to provide funding for services in eligible schools through Title I (originally Chapter I) programs. Title I services are available in many elementary schools in the country, serving approximately 25 percent of all primary-grade students (see McGill-Franzen, 2000). The most recent reauthorization of ESEA is the No Child Left Behind Act of 2001, which makes eligible for Title I services any schools in which at least 35 percent of enrolled students or students in the attendance area are from low-income families.

More recently, researchers and educational policy experts have found that students from diverse backgrounds are disproportionately represented among both the special education and remedial populations (Donovan & Cross, 2002; Patton, 1998). This and other evidence supports the view expressed by Harry and Klinger (2006) that the use of disability categories is reliant on a variety of factors, which are influenced by social and political agendas of various states, groups, and individuals. What is important to realize is that these decisions to label students or place them in remedial programs have specific and serious instructional consequences. According to Au (2000, p. 840), “Students of diverse backgrounds, who tend to be categorized as poor readers, are likely to spend more time working on skills in isolation and less time actually reading and writing.”

Although several studies have challenged the efficacy of Title I programs (see Allington & McGill-Franzen, 1989; Puma et al., 1997), there is also evidence that Title I can have a positive effect on the reading performance of students in high-poverty areas. The implementation of a model that permits school-wide classroom improvement projects rather than individual remediation and professional development for systemic reform appears to be central to success. Drawing on national data from the National Assessment of Education Progress (NAEP, 1996), McGill-Franzen (2000, p. 893) notes that, although still wide, “the achievement gap between Whites and minorities was reduced by one third during the (past) two decades, a time of increasing poverty for many families. This phenomenon has been attributed in part to federal educational interventions like Title I.”
Not surprisingly perhaps, students whose first language is not English also receive instruction within a confusing context of policy and practice. The first Bilingual Education Act (BEA) of 1968, which was originally Title VII of ESEA, initiated experimental demonstration projects for educating language minority students from low-income families. The reauthorization of the BEA in 1974 eliminated the requirement that students must be below the poverty level to qualify for services, and the 1978 reauthorization expanded services to include students with limited academic proficiency as well as those with Limited English Proficiency (LEP). Importantly, these early versions required schools to attend to students’ native languages and cultures. Subsequent reauthorizations (1984, 1988, 1994) have not ensured that students receive appropriate instructional support and have directed resources increasingly toward English-only and/or transition programs. In the most recent reauthorization of ESEA, the NCLB Act of 2001, the BEA/Title VII was replaced by the English Language Acquisition Act under Title III of this legislation, which clearly stresses skills in English only.

Once again, the impact of these social and political influences on students’ opportunities to learn is significant (Garcia, 2000). As summarized by Crawford (1997, p. 7), the problem is a serious one: “A substantial minority of LEP children—estimates range from 22 to 30 percent—receive no language assistance whatsoever (Crawford, 1997; Donly, Henderson, & Strang, 1995; Moss & Puma, 1995). That is, as many as 1.1 million children, depending on which estimate of the LEP population one uses may be receiving no (English language instruction).”

Research has consistently demonstrated that students benefit from receiving early reading instruction in their native language (August & Shanahan, 2006; Cummins, 2001; Snow, Burns, & Griffin, 1998), and the 1994 reauthorization of the BEA establishes “proficient bilingualism as a desirable goal, which can bring cognitive, academic, cultural, and economic benefits to individuals and to the nation” (Crawford, 1997, p. 1). However, strong opposition to bilingual education and a widespread advocacy for English-only schools has meant that “the political climate for bilingual education has never been chillier” (p. 2).

The existence of two or even three distinct systems for handling reading, writing, and language difficulties creates an environment in which cohesive planning and intervention are often impossible. In many schools today, there are both special education and literacy professionals (Title I or locally supported developmental-reading teachers) serving students with reading and writing problems. In addition, teachers of English as a Second Language (ESL) students and English Language Learners (ELLs) often encounter students with literacy difficulties, but these teachers rarely interact in coordinated ways with the other professionals.

Although special programs can bring badly needed resources to schools and classrooms, there are costs associated with the potential benefits. Too often, classroom teachers see children in terms of the classifications used to get them help. The funds that are used to provide compensatory education are associated with high-poverty students, who are not infrequently seen as “educationally deprived” or “without background knowledge.” Similarly, ELLs have been viewed as “culturally deprived” or “linguistically deficient” (see Crawford, 1997). Finally, Coles (1978) argued many years ago that the “learning disabled” label is an example of “biologizing social problems.” By positing biological bases for learning problems, the responsibility for failure is put “within the head of the child”
rather than placed on the shoulders of schools, communities, and other institutions. “The classification plays its political role, moving the focus away from the general educational process, away from the need to change institutions, away from the need to appropriate more resources for social use toward the remedy of a purely medical problem” (p. 333).

In other words, the labels and classifications may encourage teachers to think that these students are no longer their primary responsibility. The cost to all of us may be greater than we realize. Allington (1994, pp. 104–105) suggests, “As schools have been expected to educate a greater proportion of children to increasingly higher standards of literacy, the regular education bureaucracy has put in place an increasing array of special programs and employed an expanding bevy of special personnel in attempts to minimize the roles and responsibilities of the regular education system in educating all children.” He further argues that it is this sense of regular education’s retreat from responsibility that has led the U.S. Department of Education to call for reducing exclusionary programs and set the stage for the current inclusionary education initiative for educating handicapped children (Will, 1986). This concern has also led to a shift in federal program guidelines indicating that the academic success of disadvantaged students is the responsibility of the whole school, not just the Title I program (LeTendre, 1991) or the bilingual program (August & Hakuta, 1994, 1997).

It is clear that the trend in the past ten to fifteen years has been to address the instructional needs of students with special needs within the mainstream classroom setting. Although the pace and the effort vary considerably, movements for full inclusion mean that many special education students now often receive their education in the mainstream setting (Smith, Polloway, Patton, & Dowdy, 1995; Villa & Thousand, 1995). In addition, criticisms of pullout programs in Title I (e.g., Allington & McGill-Franzen, 1989; Slavin, 1989) have led to initiatives such as school-wide programs, Reading First, and RTI.

Although there is little doubt that neurological or constitutional dysfunction plays a role in certain cases of reading and writing difficulties, the percentage of cases accounted for by identifiable neurological problems appears to be extremely small (Spear-Swerling & Sternberg, 1998; Vellutino, Scanlon & Sipay, 1997). In fact, it has become quite clear that effective instruction and intervention can significantly reduce the number of students who become learning disabled (Dorn & Schubert, 2008; Mathes et al., 2005; Scanlon et al., 2008). We believe that the majority of difficulties in reading and writing are more likely to result from a complex interaction between the learner and the reading and writing situation than from some form of pathology. It is this complex interaction to which we turn our attention for the remainder of the text.

**Pulling It Together: RTI from an Interactive Perspective**

There is no doubt that schools are serving an increasingly diverse student population with an increasingly diverse set of programs. This means that all teachers, whether “special,” “regular,” or “remedial,” need to consider individual differences among students. In addition, they need the skills and knowledge to work in multiple settings with other professionals. For many this means new roles and responsibilities. It is this perspective that is embodied within the response to intervention (RTI) approach to identifying students with learning disabilities under IDEA 2004, and many hope that RTI will provide the leverage necessary for this perspective to take hold in all educational settings.
It is our contention that the most effective assessment and instruction practices derive from interactive perspectives such as the one described here. This is entirely consistent with the perspective on RTI put forward in this book and by the International Reading Association but is not necessarily embodied in every approach to RTI. It is important to note that there are a number of different approaches to RTI, and the legislation does not specify any particular model or approach. In fact, the federal government purposely provides few details for the development and implementation of RTI procedures, stating specifically that states and districts should have the flexibility to establish approaches that reflect each community’s unique situation. This means that the most widely used models are neither mandated nor the only possible approaches to RTI.

RTI most frequently involves a multitiered approach to the implementation of instructional modifications. The number of tiers varies across approaches, but the most widely described models involve either three or four tiers. In the three-tiered approach, low-performing students are identified and monitored as they participate in their classroom, or Tier 1, core instruction. Core instruction involves some differentiation and is intended to accommodate at least 80 percent of the students in a given class, school, or district. Those who do not make sufficient progress in Tier 1 instruction receive a second, more targeted and intensive tier of instruction intended to accelerate their progress (Tier 2). This might be accomplished by providing more time in instruction, smaller instructional groupings, and/or alternative methods of instruction targeted to specific areas of students’ needs. Tier 2 instruction is intended to be provided in addition to the Tier 1 instruction and might be provided by the classroom teacher or a specialist in a small-group context. Students’ progress continues to be monitored, and an additional 15 percent of students are expected to succeed with this supplemental instruction/intervention. Those who do not demonstrate accelerated progress with Tier 2 intervention/s are considered for even more intensive and targeted intervention in Tier 3 and/or possible LD evaluation/classification.

Tiered models of RTI are frequently characterized in the literature as one of two types: standard protocol or problem solving. The standard protocol approach (Fuchs, Mock, Morgan, & Young, 2003) emphasizes standardized (often scripted) interventions used for a standard amount of time with teachers often monitored for “treatment fidelity” (Gresham, 2007). The problem-solving approach (Marston, Muyskens, Lau, & Canter, 2003) involves collaborative efforts on the part of several members of the school community, to identify and implement optimal instructional interventions for each student who appears to be at risk for learning difficulties. Within this approach, a team of professionals assembles and develops an instructional plan designed to be responsive to the needs of the individual student. The student’s response to such interventions determines future intervention plans in an iterative manner.

Although differences are often noted between standard protocol and problem-solving approaches, many writers argue that these distinctions break down quickly and that “most RTI models described in the literature combine the two approaches... and probably function optimally when integrated into one three-tiered service delivery system” (Jimerson, Burns, & VanDerHeyden, 2007a, p. 4). Indeed, writing from a problem-solving perspective, Burns and Coolong-Chaffin (2006) observe that “most Tier 2 interventions have a standardized component” (p. 6) whether they are focused on the needs of individuals or groups of individuals.
There are also important differences among standard protocol and problem-solving approaches that are often ignored in the literature. For example, both Reading Recovery (RR) (http://ies.ed.gov/ncee/wwc/) and the Interactive Strategies Approach (ISA) (Scanlon & Vellutino, 1996; Scanlon, Vellutino, Small, Fanuele, & Sweeney, 2005) have been referred to as standard protocol programs and described as “scripted” because there are consistent lesson segments (Fuchs & Fuchs, 2006; Gresham, 2007). However, these approaches are standard only to the extent that the teachers who provide the interventions have been trained in the approaches and can therefore plan and deliver instruction responsive to students’ needs by taking into account what students know and are able to do and considering the characteristics and expectations of the classroom curriculum. This is quite different from the highly prescriptive interventions typically used in most standard protocol approaches to RTI.

Johnston (2011) has proposed a way of thinking about existing approaches to RTI that captures the most important distinctions between them. He describes approaches in terms of their primary emphasis on either measurement or instruction, arguing that the basis for this distinction comes from the legislation itself. In particular, he notes that the RTI legislation has a dual focus that poses both a measurement problem (i.e., how to replace the IQ discrepancy identification strategy [300.307]) and an instructional problem (i.e., how to reduce the number of students who end up with serious learning difficulties, by guaranteeing “appropriate instruction” [300.309]).

When conceived as a strategy for accurately identifying students with disabilities, RTI is seen more as a measurement problem, emphasizing standardization—in timing, interventions, and assessments. Most standard protocol and problem-solving models can be characterized as measurement approaches. Proponents of this approach favor standard intervention packages, preferably scripted, to increase the standardization. This assumes that an intervention that is effective on average in one setting will be effective with each new student in any new setting if implemented with fidelity and increasing intensity. If the intervention is not successful, the student is the likely source of the problem (e.g., LD, treatment resister, chronic nonresponder), because research has already demonstrated that the instruction is “effective.” This is the perspective described by many special educators and school psychologists (e.g., Fuchs & Fuchs, 2006).

When conceived as a strategy for preventing serious learning difficulties, RTI becomes an instructional problem, emphasizing optimal instruction for individual students and providing the means and context for improving teaching and teacher expertise. In this frame, assessment must be informative about the qualities of learning and teaching, giving direction to instruction. In other words, instruction is not “evidence based” unless assessment shows it is effective for the student in question. If intervention is not successful in such an approach, teachers would first look to the instruction as the source of difficulty, before the student. The attention given to RTI throughout this book should be understood within the context of this preventative perspective, which reflects the interactive view of reading and writing subscribed to here.

Using Johnston’s reasoning, Reading Recovery (RR) and Interactive Strategies Approach (ISA) are instructional approaches as opposed to standard protocol or measurement approaches. Neither program is scripted, and neither would work if it was scripted (Clay, 2005; Vellutino & Scanlon, 2002). Suppose, for example, that during instruction a
child reads a word incorrectly. A scripted program would prescribe the teacher’s response. By contrast, in RR and ISA, the teacher’s response would depend on, among other things, the text difficulty, the instructional opportunity offered by the word, the context of the error, and the child’s current processing strategies. Monitoring the teacher for “treatment fidelity” would miss the adaptive teacher expertise taking place and risk discouraging the teacher from adapting instruction as needed. To be clear, however, interventions such as RR and ISA are not “anything goes.” Instead, they focus on developing teacher expertise, because research indicates that specific programs may or may not work for individual students.

In a measurement frame, the focus is on the design and selection of tests and packaged programs rather than the teacher’s ability to adapt instruction. Expertise is minimized by the selection of instructional packages, particularly scripted ones, and testing instruments that can be used by people with limited knowledge and/or experience. Consistent with Johnston’s classification scheme, scholars who promote measurement approaches describe RTI intervention as a test of whether the student is LD (Fuchs & Fuchs, 2006), whereas those who promote instructional approaches describe intervention as a test of the appropriateness of the instruction (Scanlon, in press).

In short, RTI is not a model to be imposed on schools, but rather a framework to help schools and teachers identify and support students before the difficulties they encounter with language and literacy become more serious. According to the research, relatively few students who are having difficulty in language and literacy have specific learning disabilities (Vellutino, Scanlon, & Tanzman, 1998). Many other factors, including the nature of educational opportunities provided, impact students’ academic and social growth. For example, teaching practices and assessment tools that are insensitive to cultural and linguistic differences can lead to ineffective instruction or misinterpretations in evaluation. It is the combination of an interactive perspective on reading and writing and the preventative perspective on RTI that is articulated throughout this book. An underlying assumption of these perspectives is that instruction/intervention can and will be effective for the overwhelming majority of students who are presently experiencing school/literacy difficulties.

### CHAPTER SUMMARY

This chapter began with the idea that theories of reading and writing are important because they help us make decisions about assessment and instruction. We then suggested how reading and writing came to be treated separately in education and how the “cognitive revolution” and “social turn” have led to more-integrated views of reading and writing.

Cognitive information-processing perspectives on reading and writing were described as emphasizing subprocesses in reading and writing, readers and writers as limited-capacity processors, and speed of processing. This view has increased our understanding of reading and writing processes in terms of their components and the knowledge base of skilled readers and writers but cannot account for the variability in performance that occurs as a result of a host of social and cultural factors.
Social perspectives on reading and writing were described as emphasizing reading and writing as social and cultural phenomena, knowledge as constructed through the individual’s interaction with the sociocultural environment, and the acquisition of cognitive processes as related to reading and writing through contextualized activity and assisted learning. Social perspectives were seen as addressing some of the weaknesses observed in information-processing views and as helpful in formulating pedagogical goals and strategies for reading and writing.

The interactive view of reading and writing that serves as the basis for this text was characterized as an amalgam of the information-processing and social views. This perspective suggests that reading and writing are processes of constructing meaning through a dynamic interaction between the reader/writer and the context of the reading/writing situation. This means that reading and writing are not static, but vary as a function of contextual factors such as setting, curriculum, and instructional conditions and reader/writer factors such as background knowledge, motivation, and interests. These interactions are described more fully in Chapter 2.

The second section of this chapter described the legal, social, and political influences on reading instruction and briefly discussed the contemporary issues related to reading instruction. We began this section with a discussion of the relations between education reform efforts and reading education that linked pivotal research syntheses and the interactive view put forward in this text. We then described the legislative and legal bases for programs designed for students with special needs, including compensatory education and special education (e.g., IDEA, Section 504, and ESEA/Title I). The provisions and protections in IDEA for the rights of all handicapped children were noted, and the procedures for implementing these provisions were discussed, including recent changes to the methods schools are permitted to use in identifying students with learning disabilities (RTI). We presented criticisms of these “entitlement” programs—special education, Title I, and bilingual education—as mechanisms for minimizing the roles and responsibilities of regular education in educating all children. Responses to these criticisms have led to reforms such as the inclusionary education movement in special education, the RTI approach to identifying students with learning disabilities, the move to school-wide programs in Title I, and the reauthorization of ESEA as the NCLB Act of 2001, which included Reading First as part of Title I. Although these reforms are not without their own critics, they have all come about as a means of better addressing concerns about poor reading achievement, especially among marginalized and underserved populations.

The chapter concludes with a discussion of different perspectives on RTI and their relation to the interactive view of reading and writing that is the basis for this book. Perspectives on RTI were characterized as predominantly focused on either measurement issues, which are important for the purpose of identifying students as learning disabled, or instructional issues, which are important for the purpose of preventing learning difficulties. It is the latter preventative perspective that is emphasized throughout this book as one instantiation of an interactive view of reading and writing.
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The interactive view of reading and writing and “preventative” perspective on RTI described in the first chapter frame our thinking about the nature of reading and writing. In this chapter, we discuss skilled reading and writing and the factors that interact and influence performance in these areas. Throughout the chapter, we present evidence that even the most mechanical aspects of reading and writing are influenced by both contextual and learner factors.

As we examine the conventional components of reading and writing performance, we need to also consider how these learner and contextual factors interact to influence student performance. If a complex and dynamic view of reading and writing is not used during assessment, we run the risk of developing a distorted picture of the reading and writing processes. Inaccurate or incomplete conclusions may be drawn about students, and ineffective or harmful instruction may result.

UNDERSTANDING THE ELEMENTS OF SKILLED PERFORMANCE

It is easy to lose sight of the target of skilled reading and writing when we are working with less-skilled readers and writers. Both assessment and instruction too often focus on isolated aspects of students’ knowledge and skill. Although we consider component aspects of reading and writing in the chapters that follow, we should always start with, and return to, questions of how these relate to skilled and motivated comprehension and composition.

So what is desirable performance in reading and writing? First and foremost, readers and writers read and write. They use their knowledge and skill to accomplish personal, recreational, academic, and civic purposes. This also means that reading and writing should be defined more in terms of authentic, real-world materials and tasks than by classroom practices and texts. Readers and writers can and do apply their knowledge and skill in flexible ways to accomplish meaningful tasks, suggesting that both reading and writing are adaptive and intentional activities (Dole, Duffy, Roehler, & Pearson, 1991). In addition,
readers and writers from diverse backgrounds need to be able to perform appropriately in a wide range of contexts.

People generally associate literacy with the ability to read and write. This is the common dictionary definition, the mark of literacy in society at large, and the one generally thought of in regard to schooling. However, literacy can be viewed in a broader and educationally more productive way, as the ability to think and reason like a literate person, within a particular society. As Vygotsky (1978) suggested, because the practices of literacy and ways of understanding them depend upon the social conditions in which they are learned, the skills, concepts, and ways of thinking that an individual develops reflect the uses and approaches to literacy that permeate the particular society in which that person is a participant. (Langer, 1991, p. 11)

Over the past three decades we have come to know a great deal about the nature of skilled and motivated reading and writing performance, about learners, and about the contextual factors that influence performance (see Figure 2.1). These are the elements and factors that we must examine in the assessment and instruction of students who are experiencing problems in reading and writing. We discuss first the elements of skilled performance and then the factors that influence it.

There is some risk in pulling out elements of skilled performance for discussion. In doing so, we may lead some to believe that these are isolated or entirely separable components of reading and writing. However, as we have already discussed and will demonstrate

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**FIGURE 2.1 An Elaborated Interactive View of Reading and Writing**
later on, each of these elements interacts with others and is influenced by contextual and learner factors. In short, the whole of skilled performance is variable and dynamic. As educators and specialists, though, we need to have some idea of the component elements so that we can consider which of these are targets for assessment and instruction. Skilled reading and writing performance comprises the following elements.

Comprehension

Comprehension is the ability to use previously acquired information to construct meaning for a given text (e.g., RAND Reading Study Group, 2002). The two aspects of comprehension considered here are reading for understanding and reading to learn and/or remember.

Reading for Understanding. This area focuses primarily on readers’ ability to reason their way through a text by integrating existing knowledge with new information, drawing inferences, and forming and testing hypotheses. The goal of comprehension is the construction of an integrated representation of the information suggested by a text that is appropriate for the reading purpose. Other activities that are critical to good comprehension include establishing purposes for reading, identifying important elements of information and their relationships within text, monitoring one’s comprehension, and dealing with failures to comprehend (Baker & Brown, 1984).

The successful accomplishment of the activities that constitute good comprehension requires the use of a variety of strategies (Dole, Duffy, Roehler, & Pearson, 1991). Although there is no comprehensive list of such, we can identify a range of possible strategies that is appropriate given the developmental level of the readers and the reading activities in which they are engaged. As in the case of word analysis strategies, no single strategy is necessarily more or less important than the others. Rather, the appropriateness of a given strategy is determined by its utility in the interaction between a reader and a specific reading situation (Duffy, 1993). What matters most is how effective and efficient a strategy is for accomplishing a specific purpose.

Rather than focusing on the mastery of prerequisite skills, the interactive approach focuses assessment and instruction on the behaviors or activities that characterize good comprehension. Skills and strategies are the means to achieving the goal of good comprehension, not the end itself. It is important to keep this in mind, lest our old lists of skills be replaced by new lists of strategies and our assessment and comprehension instruction remain unchanged from past practices.

Reading to Remember/Learn. Reading to learn and/or remember what has been comprehended or understood from text is often referred to as studying. Three primary activities are involved in effective studying. First, students must be able to preview text to familiarize themselves with its form and content and to make plans for reading. Second, students must be able to locate specific information within the text. Third, students must be able to identify the organization of information within the text.

As with comprehension, the successful accomplishment of studying activities requires the use of a variety of strategies. These may include outlining, note taking, summarizing, self-questioning, diagramming or mapping text, and underlining, as well as many of
the strategies that are used in comprehending. What is most important is students’ ability to select and apply these strategies in a manner that is appropriate to the study task at hand. It is not a question of which study strategies are best, but of how effective a selected strategy is in a given study situation.

Composition

Writing is essentially idea making. Writing is considered a skill, which is also a process dependent on a range of other skills; this interdependent skills set is continually shaped by the writer’s changing purposes for writing (Dyson & Freedman, 2003). The writing process refers to a series of nonlinear compositional activities in which students engage to produce a finished piece of writing. These include prewriting, drafting, revising, editing, and publishing. To counteract the idea that these activities are discrete steps or stages, Pappas, Keifer, and Levstik (1999) refer to them as experiences of the composing process and provide descriptions of each of these writing experiences as follows.

**Prewriting Experiences.** Prewriting is generating and exploring ideas, recalling and rehearsing ideas, relating and probing ideas, planning, thinking, and deciding. Prewriting experiences occur when we talk, listen, read, research, observe, and so forth. They often include writing itself in forms such as notes, brainstorming, and outlines. Prewriting is an ongoing experience rather than a distinct period of writing and can interact with other writing experiences.

**Drafting Experiences.** Drafting involves attempts to get the ideas down and create a whole text. Writers try not to worry too much about spelling and punctuation during drafting, because they know that the text will be reconsidered, rearranged, and revised. Drafting can be interrupted by prewriting and can occur simultaneously with revising.

**Revising Experiences.** Revising has to do with attempts to rethink, review, remake, reconstruct, and reexamine the text. Revising is an ongoing activity that can occur during prewriting or during and after drafting. The writer becomes a reader when the text is reread and revised. This is also when other readers such as teachers and peers may interact with the text and provide feedback. Readers’ responses to draft text may lead to more drafting as well as more prewriting.

**Editing Experiences.** Editing is intended to clean up text so that its message is communicated by using the most appropriate language. It involves changing words and sentences, changing, deleting, or rearranging them to make the message clearer. The tone or style of the text—as well as the spelling, punctuation, and grammar—is also checked during editing.

**Publishing Experiences.** Classroom publishing emphasizes sharing. The publishing of final drafts takes various forms in terms of the nature of the final product and how it is shared. Because publishing has to do with sharing in general, it can apply to any writing, not just final drafts. Publishing can also occur with a range of audiences within the
Vocabulary Development

The importance of vocabulary development as a major contributor to reading comprehension has long been acknowledged and widely studied (Bauman & Kame’enui, 1991; Nagy & Scott, 2000; National Reading Panel, 2000). Skilled reading and writing require knowledge of the meanings of words and the ability to infer and learn the meanings of new words. Words are the labels for objects and ideas and provide an index of readers’ and writers’ prior knowledge. Readers and writers who do not have adequate knowledge of important words and concepts and/or are unable to determine word meanings will have difficulty successfully comprehending or composing texts.

The relationship between vocabulary development and reading extends beyond its significant impact on comprehension. According to Snow, Burns, and Griffin (1998, p. 47), for example, there is a “well-documented link between vocabulary size and early reading ability: the development of fine within-word discrimination ability (phonemic representations) may be contingent on vocabulary size rather than age or general developmental level.” In addition, but perhaps not surprisingly, vocabulary has been identified as a critical factor in second-language students’ reading abilities (Kim, 1995).

During the preschool years, children’s vocabulary grows at an average of seven words per day, or 2,500 to 3,000 words a year (Nagy & Herman, 1987). However, Hart and Risley (1995) found that children whose parents receive welfare have been exposed to fewer than half the vocabulary words of children whose parents hold professional positions. In their study, a typical child in a household receiving welfare heard just 616 words per hour, less than half the number heard by a child in a working-class home (1,251 words per hour) and less than one-third of the words heard in a household headed by professionals (2,153 words per hour). Hart and Risley also found that low-income children add vocabulary words more slowly than do their cohorts from more-affluent families.

Vocabulary development is not, however, simply the number of dictionary definitions of words that students have acquired. The primary focus of this area is the depth, breadth, and organization of students’ vocabulary knowledge, which seems to be much more complex and interconnected than was previously thought.

Although students’ knowledge of specific vocabulary is important, we must also consider ability to infer and to learn the meanings of new words and concepts. Students are frequently confronted in their reading with new words for which they may not already have a concept. They need to develop strategies, such as different types of contextual and morphemic analysis, as described in the next section, for inferring the meanings of unfamiliar vocabulary and independently increasing their vocabulary learning. Indeed, humans appear to store and learn words using a highly elaborated mechanism for making connections. Word knowledge seems to grow because people establish relationships between new words and previously acquired words and concepts (Nagy & Scott, 2000). In addition,
these newly acquired words change and influence the word meanings that were already stored in vocabulary.

**Word Identification and Spelling**

Rapid word identification is an essential component of skilled reading. Students must be able to recognize familiar words quickly and to decode unfamiliar words rapidly enough that the process of meaning construction is not unduly interrupted. As they read, people use a repertoire of word identification strategies and recruit a wide array of knowledge and skill. This information and these skills are related to each other but also make separate contributions to performance. That is, although readers and writers who are strong in one component area are generally strong in others, this can and does vary among individuals, and a disparity may produce difficulties in some readers or writers.

**Sight Word Recognition.** The most efficient form of word identification occurs when students recognize words immediately on sight, without sounding them out or using any other strategy to help identify them. Words that can be recognized instantly are called **sight words** and are considered part of a student’s **sight vocabulary**.

Sight words fall into several categories, especially in early reading. The first words that children can recognize in print are generally **high-potency** words (Hunt, n.d.), such as their own and other family members’ names and words with heavy contextual support such as McDonald’s (Hiebert, 1981). These words are relatively easy to remember because of their visual distinctiveness and/or because of the strong affect attached to them (Ashton-Warner, 1963).

A second type of sight words is the **high-frequency function** words (the, of, but) that appear over and over in written texts. These words are difficult to decode or figure out using word analysis strategies, because they are irregular and may not follow basic decoding rules. They are often more difficult to remember than other words, as many are similar in appearance (where, there, here, when, then). These words are usually learned as sight words when children are first learning how to read; however, many low-skilled readers have not mastered these words even by seventh or eighth grade. Limited recognition of these high-frequency sight words affects fluency and comprehension.

The last type of sight words includes all of the other words that students have learned to recognize instantly. Many of these are **content words** (meal, bake, animal) that are already part of a child’s speaking or listening vocabularies. These words are often read initially through the application of various word analysis strategies and become sight words after repeated exposure through reading. Many poor readers simply do not read enough to acquire a sufficient number of these sight words. Others may rely too heavily on one or another of the word analysis strategies that are discussed in the next section. Either way, children who do not develop an adequate sight vocabulary are likely to have difficulty in all aspects of reading.

**Word Analysis Strategies.** These strategies are used to identify printed words that we do not recognize immediately on sight. Unfortunately, word analysis has often been perceived as consisting only of (grapho)phonic analysis. Students may employ a variety of
word analysis strategies, and no one strategy is necessarily any better or worse than another. However, children who rely too heavily on only one strategy often produce distorted reading and have limited comprehension.

Although it might seem that skilled readers move through text so quickly that they must be recognizing every word at sight, it is clear that they actually do speed their word recognition by using graphophonic (letter-sound correspondence) cue systems within our language and by making predictions about words based on the context (meaning and sentence structure). For example, it is the contextual cue system that enables us to predict that the missing word in the sentence “The window in the kitchen of our new __________ is beautiful” could be either house, home, or apartment. However, it is the graphophonic cue system that assists us in determining that the missing word in the sentence “Our new h _ r _ _ is beautiful” is horse instead of house or home.

The utility of a given strategy depends on its effectiveness in the situation in which it is being applied. Therefore, children need to have a repertoire of word analysis strategies that are available for use in a variety of reading situations. Contextual analysis and morphemic analysis are both meaning-based word identification strategies. Phonic analysis is a strategy based on sound-symbol correspondence that results in approximate pronunciation of individual words.

Contextual Analysis. Probably the most common method of word identification is to use the context of the sentence in which the unknown word appears and/or the context that surrounds the sentence to determine what the word is most likely to be. Mature readers make use of two sorts of context during reading: general and local context (Durkin, 1983). General context is provided by the central topic and general organization of a text. For example, one would expect a story about the circus to include words such as ringmaster, clown, acrobat, elephant, and trapeze, or a chapter on heredity to include words such as gene, meiosis, and chromosome. Obviously, the use of general context requires prior knowledge about the topic of the text. Clues provided by the graphic aids in a text—such as charts, maps, illustrations, titles, and subtitles—are also likely to contribute to the general context of a text.

Readers who use local context take their cue from the phrases and sentences that surround an unknown word. For example, if you read, “Nora wished she had a _____ so _____ could listen to her favorite station,” you would expect the first word to be radio or possibly Walkman, because these are what we use to listen to a station. The possible choices are constrained by the syntactic and semantic cues provided by the local context. Skilled readers use context to derive word meanings, but phonic analysis (see below) for word recognition.

Morphemic Analysis. Morphemic analysis is a strategy in which the reader breaks down words into smaller meaning-bearing units as an aid to word identification and understanding. Morpheme is a linguistic term for the smallest unit of meaning in our language.

The meaning-bearing units used in morphemic analysis are root words, affixes, and inflections. For example, the word returnables can be divided into four meaningful parts: re-, turn, -able, and -s. The prefix re- and the suffix -able are affixes that change the function of the root word. The inflectional ending -s modulates the meaning of the root word
without changing its function. Other common inflections signal possession (-‘s), verb tense (-ed, -ing), or comparison (-er, -est). Finally, morphemic analysis can be used as an aid in the identification and understanding of compound words (for example, fireman, breadbox) and contractions (for example, don’t, he’ll).

Phonic Analysis. The writing systems of some other languages are different, but English is an alphabetic language. Because it is, children must gain an understanding that what gets written (and read) is a representation of the sounds of the language. Specifically, they must learn which letters or letter combinations (graphemes) represent specific English sounds (phonemes). The ability to isolate phonemes—the linguistic term for the smallest unit of sound in our language—is central to successful application of phonic analysis. Words can be sounded out letter by letter or by using spelling patterns, letter clusters, or syllables that have predictable sounds.

This phonological knowledge is critical to skilled reading. As Barker, Torgesen, and Wagner (1992, p. 335) note,

Skill at identifying words based on phonological information requires at least awareness of the phonological structure of words, knowledge of specific grapheme-phoneme correspondences, and skill in synthesizing the phonemes to produce a recognizable word. In many cases, phonological knowledge and skill can be used to identify words that have never before been encountered in print.

The specific graphophonic elements that are useful in phonic analysis are suggested by a framework for phonics instruction provided by Mason and Au (1990). These are consonant-sound relations in the initial, medial, and final positions in words; blends of two or three consonants in which each consonant retains its own sound (spr, fl); consonant digraphs, or combinations of two consonants that are pronounced as one sound (ch, th); and vowel–sound patterns represented by vowels followed by r or l (ar), as well as consonant-vowel-consonant (sit), consonant-vowel-consonant-silent e (lake), and consonant-vowel-vowel (meal).

The use of graphophonic information in longer words often requires structural analysis. In this analysis, readers must recognize and segment words by syllable boundaries (either through “rules” or by identifying recurrent spelling patterns) and then apply known graphophonic patterns to decode the segments (seg/ment) (see Figure 2.2).

Skilled readers most often decode unfamiliar words by comparing new, unknown words with known letter-sound combinations (Cunningham, 1975/1976; Ehri, 1994). Using knowledge of onsets and rimes and an analogy strategy is effective for readers with some knowledge of sound-symbol correspondence. However, some young children, especially those with very little phonological or letter knowledge, require specific instruction in individual phonemes and graphemes before they can use onsets and rimes for decoding (Gaskins et al., 1996/1997; Nation & Hulme, 1997, 2002; Vandervelden & Siegel, 1995).

Orthographic Processes and Spelling. Most experts today agree that word identification in skilled readers involves two types of knowledge and skill: phonological and orthographic. Orthographic processes are linked to the appearance of specific
## FIGURE 2.2 The Synchrony of Literacy Development

### Layers of the Orthography

<table>
<thead>
<tr>
<th>ALPHABET/SOUND</th>
<th>PATTERN</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</table>

### Reading and Writing Stages:

**Emergent**
- Pretend read
  - Read aloud, word-by-word, finger-point reading.
- Pretend write
  - Word-by-word writing, writing moves from a few words to paragraph in length.

**Beginning**
- Read aloud, word-by-word, phrasal, some expression in oral reading. "Wright brothers" of reading.

**Transitional**
- Approaching fluency, phrasal, more organization, several paragraphs.

**Intermediate**
- Read fluently, with expression. Develop a variety of reading styles. Vocabulary grows with experience reading.

**Advanced**
- Fluent writing, build expression and voice, experience different writing styles and genres, writing shows personal problem solving and personal reflection.

### Spelling Stages:

**Emergent**
- Letter Name-Alphabetic
  - Early, Middle, Late

**Within-Word Pattern**
- Early, Middle, Late

**Syllables and Affixes**
- Early, Middle, Late

**Derivational Relations**
- Early, Middle, Late

Examples of spellings:
- **bed**
  - MST, E, bd, bad, bed

- **ship**
  - TFP, S, sp, sep, shep, ship

- **float**
  - SMT, F, ft, fot, flat, float, flowt, flowt, float

- **train**
  - FSMP, G, jn, jan, tan, chran, tran, traen, traen, train

- **bottle**
  - B, bt, botl, bodol, botel, bottle

- **cellar**
  - S, slr, salr, celr, seler, cellar

- **pleasure**
  - P, pjr, plasr, plager, plejer, pleser, plesher

- **confident**
  - Confident, confident, pleser, plesher, plesour, pleasure

- **opposition**
  - Confident, confident, confident, confident, confident, confident

words. “Orthographic knowledge involves memory for specific visual/spelling patterns that identify individual words, or word parts, on the printed page. Orthographic knowledge . . . would seem to be acquired by repeated exposure to printed words until a stable visual representation of the whole word, or meaningful subword units, has been acquired” (Barker, Torgesen, & Wagner, 1992, p. 336).

Although there are relatively strong relationships between orthographic and phonological skills in most individuals, it is also quite clear that these two abilities make unique and separate contributions to reading and writing performance (Juel, Griffith, & Gough, 1986; Olson, Wise, Conners, Rack, & Fulker, 1989). For example, orthographic skills appear to make a bigger difference in the reading of connected text (versus isolated word recognition) and also seem more highly related to fluency in reading (see below). It also appears that the relationships between phonological and orthographic skills are developmental, with orthographic skill making a stronger contribution to word reading after first grade (that is, after the initial stages of reading acquisition).

What has become increasingly clear is the close relationship between early reading and spelling. (Templeton personal communication, September 20, 2001):

Research strongly suggests that a common core of word knowledge underlies the process of word identification in reading and the process of spelling words in writing . . . in fact, what students learn about words in appropriate spelling activities helps the developing process of reading more than reading helps the development of spelling knowledge (Bosman & van Orden, 1997; Ellis & Cataldo, 1990). Spelling supports the ability to read words in two ways: First, the memory for each specific word and its structure is reinforced; second, common spelling patterns across words are discerned and abstracted; the construct of pattern in turn supports recognition and identification of words during the reading process.

In short, the orthographic knowledge that students build up by studying word spellings and examining spelling patterns is precisely what helps them to move from decoding individual letters and sounds to storing and retrieving larger chunks (see the discussion of fluency in the next subsection).

It is likely that word study is initially more useful to reading than to spelling, because the ability to spell appears to be a consequence of knowing about words in many ways—their visual or graphic characteristics, their phonological and structural properties, and their meanings. English does not have a one-to-one correspondence between graphemes (letters) and phonemes (sounds). The twenty-six letters of the alphabet represent approximately forty-four phonemes. To further complicate the situation, three letters—c, q, and x—do not represent unique phonemes, and there are anywhere between five hundred and two thousand spellings to represent the forty-four phonemes in English. The sheer number of spellings and the lack of fit between phonemes and graphemes suggest that children are unlikely to learn to spell simply through memorization or sounding out words.

Like learning to read and write, learning to spell is a developmental process. More than thirty years ago, the evidence began to show that young children, even preschoolers, use their knowledge of English phonology to invent spellings (Read, 1971, 1975, 1986). Since then, research has revealed that students move through stages in their spelling development and that these stages are marked by broad, qualitative shifts in the types of spelling errors children make (Bear, Invernizzi, Templeton, & Johnston, 2008). Students’ knowledge and
skill at each development stage are fairly predictable, although individual variation—the result of the sorts of interactions described earlier—is visible also (see Figure 2.2).

Not all children invent spellings in exactly the same way or at the same pace, but they do develop spelling strategies in roughly the same sequence (Henderson, 1980) and move through roughly the same stages to become conventional spellers (Gentry, 1981, 1982; Invernizzi, Abouzeid, & Gill, 1994). These stages are described more fully in Chapter 7. Generally, children move from early scribbles and letter-like forms to representing sounds without reference to conventional spelling combinations (semiphonetic and phonetic stages). Eventually, children stop relying only on phonological information and begin to use morphological (word parts) and visual information to spell many words correctly.

Researchers also study children’s spelling development in later years (see Bear & Barone, 1998; Bear & Templeton, 1998; Bear et al., 2008). For example, Firth (1980) found that older students who are good readers and spellers make spelling errors that are characteristic of the within-word pattern or transitional stage, while students who are poor readers and spellers make errors that are characteristic of the semiphonetic and phonetic stages. Other studies indicate a developmental shift among better spellers from a reliance upon the phoneme-grapheme strategies used in the early school years toward a strategy of spelling words by analogy to other known words.

In summary, rapid and accurate word recognition is important to effective and efficient reading, and accurate spelling is important to effective communication in writing. A combination of strategies and abilities is useful, especially in the earliest stages of reading/writing acquisition. However, as quickly as possible, students need to acquire accurate and rapid word identification skills, which appear dependent on both good phonologic and orthographic skills.

Rate and Fluency

“Fluent readers can read text with speed, accuracy, and proper expression” (National Reading Panel, 2000, p. 3–1). Although accuracy and rate are related to fluency, they are not the same thing; oral fluency also involves readers’ ability to group words into meaningful phrase units. Smoothness and the maintenance of comprehension are important as well (Rasinski, 2004, 2006).

Rate of reading refers to the speed of oral and/or silent reading as measured in words per minute. Proficient reading requires automaticity, or the ability to identify words rapidly enough that sufficient resources are available for attention to comprehension. Research suggests that beginning readers who develop automatic word identification skills are better able to comprehend text (Perfetti & Hogaboam, 1975; Torgesen et al., 2003). How fast is fast enough and how slow is too slow are questions that are still open for debate, however. Norms for reading rate vary widely, and research designed to improve comprehension by teaching rapid word identification has produced equivocal results. It appears that reading rate may be a necessary but insufficient condition for proficient reading and that decisions about the adequacy of a student’s reading rate may need to be made on an individual basis.

Until fluency was made prominent by the National Reading Panel report in 2000 as a key area of reading instruction, it was often overlooked in assessment and instruction (Allington, 1983b, 2006). This is likely because, in the absence of evidence linking fluency
to comprehension, it was mistakenly assumed to be merely a symptom of poor word identification skills (Allington, 1983b; Rasinski, 2006). Research has now established that there is a strong relationship between fluency and comprehension, including evidence from two special studies related to the 1992 and 2002 National Assessment of Educational Progress (NAEP) reading assessments (Daane, Campbell, Grigg, Goodman, & Oranje, 2005; Pinneell et al., 1995). There is also evidence that high levels of fluency are related to ample opportunities to practice reading (Rasinski, 2006; Snow, Burns, & Griffin, 1998). This, in turn, is likely related to the fact that the development of good orthographic knowledge and skill seems to make a strong contribution to both rate and fluency. Perhaps, as Barker, Torgesen, and Wagner (1992) note, orthographic skills allow readers to recognize whole words automatically, circumventing the need for deeper phonological analysis. This allows readers to focus more attention on the other aspects of reading text, most notably meaning.

Although fluency is now an important part of assessment and instruction, there is still a great deal of confusion about exactly what it is; there is no single definition. As Rasinski (2006) notes, to some it is primarily an act of oral reading—specifically the expressiveness associated with the oral reading. To others, reading fluency has to do with accuracy and speed in word decoding. And to yet others it has largely to do with the comprehension that comes as a result of reading with appropriate expressiveness or decoding speed and accuracy. Depending on the definition, the method of assessment is likely to vary. Further clarification is needed of what it is, how it works, and what role it should play in assessment and instruction.

Grammar, Usage, and the Mechanics of Writing

Grammar is the description of the structure of a language, based on principles of word and sentence formation. In the case of oral language, students will need to learn about pragmatics, or the study of what is the appropriate language usage in varying social situations and contexts. In the case of written language, students will learn that most grammar and usage issues come into play during the revision and editing phases of the writing process. Through practice, students gradually become more and more familiar with the conventions of grammar and usage, but at some point the “rules” of grammar and usage may need to be addressed directly. However, to be helpful, they must be viewed as part of a real social context or of the revising and editing phases of writing.

Grammar. Grammar can be defined as a system of rules by which words are arranged into meaningful units. Everyone who speaks and understands English knows the rules, even if they can’t articulate them. For example, we know that *The dog chased the cat up the tree* is a grammatical sentence, while *Tree up cat dog the the chased the* is not, because it violates rules of English grammar. Because we are aware of the violations, we must, on some level, know the rules that have been violated, even if we can’t state them clearly. Rules such as these are best characterized as subconscious abstract concepts.

In contrast, explicit rules have been created by individuals trying to describe English grammar as it is used. A perfect set of explicit rules would be one that described all of the sentences that most people would consider grammatical and excluded any that would not be considered grammatical. No one has ever developed a perfect set of rules, but linguists...
continue to try and in the process have developed different types of grammars. Elements of
two kinds of grammar—structural and transformational—are most relevant to our concerns
with grammar instruction and learning. These elements are: form classes or parts of speech,
structures of common sentences, and transformation of sentences.

Structural grammar focuses on sentence patterns and the functions of words in sen-
tences. It identifies four form classes resembling nouns, verbs, adjectives, and adverbs. All
the words that can fill a particular slot in a sentence belong to the same class. Advocates
of structural grammars describe patterns or basic sentence types. For example, Roberts
(1962) developed a sequence of ten patterns that are frequently used in textbooks that use
a structural approach (e.g., determiner-noun-verb [intransitive]-adverb).

Transformational grammar focuses on the process used to generate sentences and
ideas. Using four or five basic sentence types (or kernels) as the starting point for making
sentences, we add transformations to change our basic sentences into more-complex ones.
Three kinds of sentence transformations are those that (1) change one type of sentence
into another, such as questions, negatives, and passive sentences; (2) conjoin elements of
several sentences into compounds; and (3) reduce some sentences into fragments and insert
them into other sentences (Malmstrom, 1968).

Data from the national Assessment of educational Progress (nAeP) writing as-
sessments in 1998 and 2002 indicate that approximately 85 percent of students in grades
4 and 8, and 75 percent of students in grade 12 have achieved a basic level of proficiency
in writing (U.S. Department of Education, 2003). Basic proficiency at grades 4 and 8 in-
cludes grammar, spelling, and capitalization accurate enough to communicate to a reader,
although there may be mistakes that get in the way of meaning. At grade 12, the basic level
requires that errors do not get in the way of meaning. So, it appears that nearly all students
can use the basic sentence types in their writing but that instruction using such techniques
as sentence combining can be beneficial to a broad range of students as their writing skills
mature (Hillocks, 1986).

Usage. How language is used, or the pragmatics of language, differs quite a bit between
daily life and school. Academic success requires that students master structures and con-
ventions peculiar to academic discourse, and many students find it difficult to adjust to its
constraints. Academic English uses features that are more common in written than in spo-
ken language. It conforms to organizational patterns and genres tailored to content areas
and is more common in some cultures than in others. Many English-language learners and
students with language difficulties attain mastery only with expert instruction over many
years (Snow, Griffin, & Burns, 2005).

Functional grammar provides a means of analyzing language in terms of what it en-
ables us to do and to mean (Halliday, 1994; Schleppegrell, 2004). Citing Halliday (1994),
Schleppegrell (2004) indicates that functional grammar provides a “principled” basis for
describing how and why language varies in relation to both who is using it and the purposes
for which it is used. A functional grammar is not just concerned with identifying grammatic-
ical elements (e.g., nouns, verbs, etc.) or with the role that different elements play within
a sentence (e.g., subject, object, etc.). Rather, it is used to analyze the configurations of
grammatical structures that are typical of or expected in different kinds of tasks and con-
nects those linguistic choices with the social purposes and situations related to particular
spoken or written texts. Functional grammar, then, can reveal how the context of schooling is realized in the language used in the texts and tasks that constitute classroom practices (Schleppegrell, 2004).

**Mechanics of Writing.** The mechanics of writing include punctuation and capitalization. Punctuation and capitalization are important because they clarify meaning. During oral exchanges, listeners hear pauses, speech stops, and rising and falling intonation that help them construct meaning. Readers and writers replace these verbal signals with punctuation and capitalization.

Studies show that punctuation—particularly with commas and periods—is frequently a problem for elementary-age students (Porter, 1974). According to Snow and colleagues (2005), it appears that teaching punctuation rules or teaching a mechanical response, such as pausing whenever a comma is recognized, is not helpful. However, developing familiarity with grammatical structures more common in written language than spoken language may be helpful.

Understanding Contextual Factors That Influence Performance

Contextual factors are the least likely to be considered in any discussion of reading and writing performance. Indeed, the importance of context has only recently been acknowledged. Most recently, the contextual factor of text complexity has taken a prominent role in the Common Core State Standards for English language arts. In the following sections, we describe briefly several aspects of context that have been shown to influence reading and writing: the settings in which reading and writing events occur, the reading and writing curricula, the instructional methods employed, the instructional materials and tasks associated with reading and writing, and the assessment practices relative to reading and writing instruction. This brief discussion serves only to introduce ideas that will be discussed at greater length in Chapters 5 and 6.

**Settings**

The community and culture of students exert central, often critical, influence on performance in reading and writing. It also appears that the willingness and ability of the school to respond to local and/or cultural characteristics has a powerful impact on reading and writing acquisition and performance and can determine the effectiveness of instruction and achievement (Gallego & Hollingsworth, 2000; Goldenberg & Gallimore, 1991). Home environments that are different from the dominant culture are not pathological. Students can be hopelessly handicapped, however, if the school expects and accepts only one type of entry experience from its students. For example, students of diverse backgrounds enter school with strengths in their home language, if not the standard language. However, it is not uncommon for schools to ignore these strengths through the exclusion or limited use of instruction in students’ home language or through the low status accorded the home
language. Research suggests that this can lead to poor literacy achievement and may cause students to lose confidence in their abilities as language and literacy learners (Au, 2006).

The settings in which reading and writing and their instruction take place affect reading and writing performance. Meaning making depends on the broader context in which a text is being written or read. For example, imagine that you are reading or writing a text on common antidotes to poisoning. Now imagine the effect that context would have in the following situations: the evening newspaper, a test of reading comprehension, at home after you believe your child has ingested some poisonous substance, and a first aid course. Similarly, researchers have found differences in students’ performance on the same task, depending on subtle changes in the classroom context—that is, whether students were asked to do the task as part of an informal lesson or as part of a formal testing situation (Mosenthal & Na, 1980). Indeed, several aspects of classroom settings have been examined and found to contribute to students’ reading and writing achievement. For example, grouping patterns influence both teachers and students. Reviews of ability grouping for reading instruction suggest that instructional and social reading experiences differ for students in high- and low-ability reading groups and that these differences influence students’ learning (Allington, 1983a; Hiebert, 1983). Grouping practices may also communicate information to students about their relative ability and may eventually influence their learning (Opitz, 1998; Weinstein, 1976).

**Instructional Practices**

**Standards and Curriculum.** The standards and curriculum in particular school settings have a critical influence on student performance, because they may influence access to instruction, dictate the type of instruction offered, and even determine what is counted as reading and writing performance. Teachers and schools decide what and how to teach by referring to the standards established by their district and/or state. Both the nature of these standards and the curricula that grow out of them have often been controversial. In some places, standards setting has been an inclusive matter, leading to strengthened instruction and enhanced learning. In other places, standards appear to have been imposed, and the quality is uneven. In either case, standards have the effect of making public what is valued in reading and writing (see Wixson & Dutro, 1999; Wixson, Dutro, & Athan, 2004).

As noted in Chapter 1, there is a new player in the standards arena—the Common Core State Standards for English Language Arts (CCSS-ELA). The CCSS-ELA provide an integrated view of the areas within the English language arts—reading, writing, speaking/listening, and language. This integrated view further encompasses attention to literature and informational text reading and writing at K–5. The 6–12 standards are first organized by ELA and subject matter to distinguish which standards are the responsibility of the English language arts teacher and which are to be addressed by teachers of history/social studies and science/technical subjects.

The integrated view of ELA presented by the CCSS-ELA contrasts sharply with the heavy emphasis that has been placed on reading in recent years almost to the exclusion of other areas of the language arts and other subject areas in the K–12 curriculum. When reading is part of an integrated model, the emphasis changes dramatically from the “big 5” that have dominated curriculum and instruction for the last decade or more—phonemic
awareness, phonics, fluency, vocabulary, and comprehension. Within the CCSS-ELA, phonemic awareness, phonics, and fluency are addressed primarily in the “foundational skills” addendum to the K–5 standards. Vocabulary is highlighted in the Language strand, and comprehension is emphasized throughout. Add to this the emphasis on reading and writing in the disciplines at 6–12, and these standards are likely to result in a major shift from an overemphasis on decoding to increased emphasis on comprehension of and learning with and from oral and written language.

For students who experience problems with reading and writing, the standards/curriculum issue is even more complicated. For decades, American education adopted the position that it was not fair to hold all students to the same standards and searched for the most appropriate techniques for differentiating instruction and for setting differential educational goals (Allington, 1991). Not until the 1970s and 1980s did anyone begin to suggest that what had been considered differentiation might actually be a form of discrimination (Carew & Lightfoot, 1979). It was observed that students with the least adaptive capacity were asked to make the greatest adjustments across the school day (Good, 1983), including exposure to multiple literacy curricula often representing divergent theories of reading and writing processes. Increasing evidence of the lack of efficacy of the “second system” programs that have evolved since the turn of the century (Allington, 1994) has resulted in the current movement toward establishing a common set of high-level curriculum standards for all students. Many believe that this is the only way to ensure that all students are provided equal opportunities to achieve.

The important point for this discussion is that reading and writing standards/curricula have a tremendous impact on student performance. Many local school districts have their own curriculum, as do many states, although the CCSS-ELA may alter this fact. Curricula that reflect a more skills-based perspective are likely to promote very different procedures for instruction and assessment than curricula that reflect a more interactive or sociocultural perspective. The nature of the curriculum cannot be underestimated as a factor in students’ reading and writing performance.

**Instructional Methods.** Teachers and the lay public both are aware that instructional methods make a difference in students’ learning (see Wharton-McDonald, 2011). Differences in instructional methods that influence performance vary along a continuum from direct (or explicit) instruction to discovery (or implicit) learning. Direct instruction involves explaining or telling students the procedures involved in engaging in a particular reading or writing activity. Indirect methods instruct through repeated practice with activities that are examples of the desired reading behavior. Discovery methods emphasize placing students in a literate environment in which reading and writing will develop naturally.

Other aspects of instructional method that influence student performance include: the extent to which teachers support, or scaffold, students as they engage in reading and writing activities; the nature and content of instructional dialogue or discourse; and the level of instruction offered. In addition, students’ motivation for reading and writing is affected by specific instructional methods. For example, there is evidence that instructional programs that focus on the processes of reading and writing have a powerful impact on students’ awareness of what has been taught, awareness of comprehension and composing strategies, and performance on tasks that require strategic reading and writing (Duffy et al., 1986;
Attention to a strategic approach can enhance students’ self-regulation and independence (Scanlon, Anderson, & Sweeney, 2010). Morrison, Bachman, and Connor (2005) recently identified four critical dimensions of beginning reading instruction as follows: (1) explicit versus implicit, (2) code- versus meaning-focused, (3) teacher-managed versus child-managed, and (4) change in amount of instruction over time. Results of a study that examined the nature and impact of these instructional dimensions on decoding growth in first-grade students provided evidence that the effect of amount, type, and course of instruction depended on students’ skills at the beginning of first grade (Connor, Morrison, & Katch, 2004). For example, children who started first grade with weak decoding and vocabulary skills achieved greater decoding skill growth when they were in classrooms where the teacher provided more time in teacher-managed explicit decoding activities, especially at the beginning of the year, and when the teacher started the year with smaller amounts of child-managed implicit instruction but increased the amount over the school year. In contrast, children who started first grade with strong vocabulary but weaker decoding skills experienced the greatest decoding skill growth when instruction consisted of high amounts of child-managed explicit instruction along with high amounts of teacher-managed explicit instruction all year long. Similar interactions were found for reading comprehension growth with third-grade students. Results such as these demonstrate clearly the impact of instructional methods and how they interact with learner factors.

The tasks that students must complete in association with their reading and writing can also make a difference in performance. For example, questioning is probably the most frequently used task in reading instruction. The evidence suggests that the type of questions children are asked can influence their comprehension. It appears that implicit or inferential questions are more difficult for many children than explicit or literal questions (Pearson, Hansen, & Gordon, 1979). Furthermore, there is evidence that the type of questions asked influences the numbers and types of inferences students make. Specifically, questions with answers stated explicitly in the text result in fewer inferences, questions that require the integration of information in the text result in a larger number of text-based inferences, and questions that require students to draw heavily on their prior knowledge result in inferences that are more knowledge based (Wixson, 1983a). In sum, many dimensions of instructional methods are likely to have a major impact on reading and writing performance, including the motivation to read and write.

Instructional Activities and Routines. The instructional tasks and practice activities that students perform define reading and writing for them. For example, in some classrooms students spend more time doing instructional tasks than they do actual reading and writing. It should be noted that these instructional tasks generally provide practice of separate component areas, not practice in the holistic act of reading or writing. This is especially true for students who are experiencing reading and writing difficulties (Allington, 1984; Vaughn, Levy, Coleman, & Bos, 2002).

Alternatively, many classrooms contain other types of materials and tasks, including large numbers of “little” books, or leveled readers, that are accompanied by instructional frameworks and suggestions for assessment. These program materials are often used by teachers who identify themselves as “literature based” or “balanced” and exert an influence
on practice that is as substantial as basal programs. Similarly for writing, some programs are still defined by grammar books and teacher-assigned “creative writing” activities, and others involve writers’ workshops, conferences, and self-selected topics. The students in these classrooms think about reading and writing differently than do students in classrooms where reading and writing are extensive and pervasive and where tasks are linked in authentic ways to the reading and writing products. These different tasks also produce different types of writers.

Assessment Practices. One of the truisms of education is that you get what you assess. For a variety of reasons, teachers are likely to direct their instructional attention toward the types of performance that will be evaluated, especially if the evaluation is highly public or used for other high-stakes purposes. Most educators have concluded that the standardized tests that are currently used in U.S. schools fail to adequately assess either sophisticated literacy skills or real-world literacy abilities. On the other hand, the nature of many classroom-based assessment efforts is also inadequate, often failing to focus on important content, complex ideas, or high-level strategies. For example, there is evidence that classroom measures such as correct words per minute, which are commonly used as indicators of students’ overall reading level, overestimate student’s comprehension abilities (Carlisle, Cortina, Zerg, & Schilling, 2006).

With the adoption of the CCSS by most states, plans for new state assessments are under development. At the time of this writing, most states have joined one of two state consortia engaged in the development of new state assessments aligned with the CCSS, although there are still a handful of states that are not part of either consortia. The goal of both consortia is to create integrated assessment systems, which include a variety of assessments and resources designed to achieve a range of assessment purposes. The various measures and resources under development correspond roughly to the different assessment purposes described in this text (see Chapter 3) and include (1) measuring the level of performance of individuals and/or groups of students (screening), (2) monitoring student progress (interim or benchmark), and (3) evaluating overall achievement of individuals and groups (outcome).

Because assessment practices often exert a strong influence on instruction, they should be examined carefully. Teachers should be aware that the ways in which information is gathered and the specific abilities that are tested can both influence student performance and affect teacher appraisal of student competence (Valencia, 2004). For example, the form and content of external accountability measures can influence students’ reading and writing performance. Specifically, student’s performance is likely to suffer when the form and content of an external accountability measure is inconsistent with the form and content of classroom tasks. These types of inconsistencies can also confuse students about their learning goals.

It is important to be aware of what types of assessments are being used and for what purposes within specific instructional contexts. If the only form of assessment is testing that is focused on isolated skills, then students are likely to be attending to skill mastery at the expense of integrated skill performances. In contrast, if the only form of assessment is student self-reflection, then students are likely to become more responsible for their own learning but may miss some important skills and not progress as rapidly as needed to
perform at desirable levels. Assessment practices can and do have a significant impact on student’s reading and writing performance.

**Instructional Resources**

Students are presented with an enormous array of materials and tasks during their development as readers and writers. Prominent among these are commercial instructional programs, trade materials, tutoring programs, and computer technology. In many classrooms today, there is a combination of these resources available to students and teachers as part of reading and writing instruction. However, it is important to note that children who attend schools in disadvantaged districts have many fewer texts and technologies available than do children who attend schools in more-affluent areas (Duke, 2000), and that the availability of textual resources in homes and libraries varies similarly (Neuman, & Celano, 2001).

**Core Instructional Programs.** In many classrooms, students still work primarily from commercial, basal reading programs, and teachers are heavily influenced by the published materials that accompany these materials. Over half of the teachers and administrators surveyed in the late 1990s indicated that basal reading programs with trade-book supplements provided the foundation of their instruction (Baumann, Hoffman, Duffy-Hester, & Ro, 2000). A review of basal reading programs suggested that the curriculum presented by these programs changed during the 1990s (Hoffman et al., 1994). During the early 1990s, for example, the literature in anthologies was drawn from children’s literature rather than contrived or commissioned pieces, the vocabulary was less stringently controlled, and there was a decreased focus on phonics and isolated skills instruction. Newer programs continue to emphasize good literature, while providing more-controlled vocabulary options for early reading practice. In addition, they are likely to include more-explicit phonics than was true previously.

Core instructional materials inevitably become a part of a teacher’s instructional set and often determine both what is read and written and what instructional activities are employed, which in turn has an effect on student learning and achievement. For example, Wilson, Martens, and Arya (2005) found that the story retellings of second-grade students taught using basal programs emphasizing systematic, explicit phonics instruction were significantly less cohesive and included fewer inferences and connections than those of students taught using a literature-based approach to instruction. They concluded that the program of instruction affects students’ strategy knowledge and use, as well as their comprehension abilities, and that it shapes the students’ purposes or goals for reading.

**Textbooks and Trade Materials.** Students come into contact with a wide variety of trade materials in their daily lives as readers and writers: comic books, cereal boxes, assembly instructions, entry forms, Facebook pages, and so forth. It is possible, and perhaps even desirable, to consider any or all of these materials as having instructional potential. However, the range of materials used for instruction in most classrooms is more constrained than this, and the materials to which students are exposed during instruction often differ from those they encounter in other contexts (Wade & Moje, 2000).

In almost every classroom, students are asked to read various types of prose, or written, texts. Prose selections used for instructional purposes come from a variety of sources,
including basal readers, trade books (children’s fiction and nonfiction books), subject-area textbooks, magazines, reference materials, weekly news publications, and the students’ own writing. Research consistently demonstrates that the printed materials students encounter in instructional contexts influence their reading and writing, and this awareness plays a prominent role in the attention to text complexity in the CCSS-ELA. In the past, one of the few text features that received a lot of attention was difficulty or readability, as measured by factors such as the number of syllables in the words and the number of words in the sentences. Current research has demonstrated that a number of other factors have a significant impact on both how much and what students understand and learn from a text. The presence or absence of these factors determines the extent to which a given text can be seen as “considerate” or “inconsiderate” (Armbruster, 1984).

Considerate texts are designed to enable the learner to gather appropriate information with minimal effort; inconsiderate texts require the learner to put forth extra effort to compensate for the inadequacies of the text. Inconsiderate texts are not necessarily incomprehensible, but they do require more effort, skill, and prior knowledge to comprehend. Two factors that determine the considerateness of a given text are its type and organization. For example, under certain circumstances students’ oral reading and writing errors have been observed to vary according to the type of text they were reading or writing (stories versus informational articles, subject-area texts versus basal materials). Stories are more easily comprehended than informational texts for many students, and well-constructed stories are more easily comprehended than those less well organized (Brennan, Bridge, & Winograd, 1986; Olson, 1985). In addition, text structures differ among subject matter domains in ways that influence student performance (Snow et al., 2005).

The linguistic properties of texts including word usage, sentence structure, and sentence connectives constitute another factor influencing comprehensibility. These properties vary across different types of texts and influence performance on a variety of reading and writing tasks. For example, texts that include a large proportion of words that occur with high frequency in our language are more easily comprehended than are texts with a large proportion of low-frequency words (Ruddell, 1965; Wittrock, Marks, & Doctorow, 1975).

The comprehensibility or considerateness of a text is also influenced by its structural characteristics, including all the features of texts that authors and editors use to aid organization and understanding, such as headings, boldface type, illustrations, diagrams, and end-of-chapter questions and activities. For example, there is evidence that comprehension is enhanced when main-idea statements are highlighted through the use of italics or headings (Baumann, 1986). It also appears that students are actually led to attend to unimportant ideas when structural features focus on trivial information. For example, if questions that follow reading focus on insignificant details, children are more likely to learn this information than the more important ideas in the text (Wixson, 1984).

Electronic Texts. Although access varies considerably by school and district, multimedia and computer activities are an important additional type of material. Careful examination of these programs is especially important for teachers who work with less-able readers and writers. There is continuing pressure to operate remedial settings through the use of diagnostic-prescriptive management systems that involve computer testing, computer-generated profiles of skill needs, and computer programs for remedial instruction. There
are also many other types of computer programs intended for assessment and instruction in reading, and their role in instruction may have an important effect on students’ reading and writing performance.

UNDERSTANDING LEARNER FACTORS THAT INFLUENCE PERFORMANCE

An interactive view of reading and writing suggests that a variety of learner factors influence reading and writing performance. These include prior content knowledge; knowledge about reading and writing, including both phonological and metacognitive awareness; attitudes and motivation; and the physical, cognitive, linguistic, and social-emotional correlates of reading and writing disability.

Prior Content Knowledge

It is difficult to overestimate the influence of children’s prior knowledge and their experience. In their review of children’s learning from text, Alexander and Jetton (2000, p. 291) conclude, “Of all the factors [involved in learning from text], none exerts more influence on what students understand and remember than the knowledge they possess.”

Research findings have consistently demonstrated how prior knowledge and experience influence reading comprehension (Lipson, 1982, 1983). Simply put, the more accurate and elaborated knowledge readers have about the ideas, concepts, or events described in the text, the better they will understand. On the other hand, limited information and/or misconceptions create obstacles to comprehension.

Comprehension proceeds so smoothly under ordinary circumstances that most adults are unaware of the process of constructing a model or interpretation of a text that fits with their knowledge of the world. It is instructive to try to understand material for which meaning is not immediately apparent. For example, take a moment to read and try to understand the following paragraph in an exercise used in a classic study by Bransford and Johnson (1972, p. 722):

The procedure is actually quite simple. First you arrange things into different groups. Of course, one pile may be sufficient depending on how much there is to do. If you have to go somewhere else due to lack of facilities that is the next step, otherwise you are pretty well set. It is important not to overdo things. That is, it is better to do too few things at once than too many. In the short run, this may not seem important, but complications can easily arise. A mistake can be expensive as well. At first the whole procedure will seem complicated. Soon, however, it will become just another facet of life. It is difficult to foresee any end to the necessity for this task in the immediate future, but then one never can tell. After the procedure is completed one arranges the materials into different groups again. Then they can be put into their appropriate places. Eventually they will be used once more and the whole cycle will then have to be repeated. However, that is part of life.

Were there any words you could not pronounce or for which you do not have some idea of the meaning? Is the syntax too complex? You probably did not have problems in
either of these areas. Yet for most people this passage does not make much sense. However, it does become meaningful as soon as we use the title “Washing Clothes.” Then the well-known concepts related to doing this job can be used to construct and assign meaning.

Learners also need to understand a great deal about social interactions and human relationships to connect ideas in texts. This type of prior knowledge seems to be especially important in inferential understanding (Lipson, Mosenthal, & Mekkelsen, 1999). Fragmented information and/or misconceptions can impede comprehension (Hynd & Alvermann, 1986; Lipson, 1982, 1983; Maria, 1986). This is especially troublesome when students attempt to learn from informational texts. People read unfamiliar text more slowly, they remember less, they construct meanings that are inconsistent with the author’s intention, and they sometimes reject the text information outright. Misconceptions and limited information influence comprehension in a number of ways (see Guzzetti & Hynd, 1998).

Of course, prior knowledge and text attributes interact. For example, the comprehension of students with low prior knowledge is significantly improved when they read “high-coherence” text, whereas students with high prior knowledge actually benefited from low-coherence text under some conditions. Presumably, with appropriate prior knowledge, they generated more inferences because the text provided less information (McNamara, 2001).

There are many times when a text written for an audience with certain background knowledge is given to an audience with different or limited knowledge of the topic. For example, certain learners will have difficulties trying to understand the materials in Figure 2.3, which were taken from newspapers in Vermont and Australia. Now suppose

**NIGHT AUCTION**

**Thursday, Oct. 9th  7:30 PM**

Located on the so-called Harry Domina farm on Route #118 between East Berkshire and Montgomery, Vt. Watch for Auction Signs at Route Jct. #105 & #118 in East Berkshire, Vt.

**50 Holstein Heifers  50**

22 of the heifers are fresh within the last ten days and are milking between 50 to 60 lbs. of weighted milk, balance are all springing. 5 of these heifers are registered with papers that will be handed out the same night. Heifers have good size and condition and are going to be sold for cash regardless of price. Heifers have all been T.B., blood tested and inoculated from shipping fever and I.B.R. Heifers are open for inspection anytime on site where auction is to be held. Trucking available.

**Auctioneer:**
Tel: 

**Sales held inside tent**

**Owners:**

Berkshire, Vt.  Tel.: 

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**CRICKET MATCH**

**AUSTRALIA vs. ENGLAND**

A hair-raising century by Australian opener Graeme Wood on Friday set England back on its heels in the third test at the Melbourne Cricket Ground. Unfortunately, living dangerously eventually cost the Australians the match. Wood was caught out of his crease on the first over after lunch. Within ten more overs, the Australians were dismissed. Four were dismissed by dangerous running between creases. Two were dismissed when the English bowlers lifted the balls from the batsmen’s wickets. The three remaining batsmen were caught by English fieldsmen. One was caught as he tried for a six. When the innings were complete the Australians had fallen short of the runs scored by the English.

FIGURE 2.3  Text Taken from Newspapers in Vermont and Australia
you were asked to identify the main ideas of these texts. If you failed to complete this task successfully, would it mean that you do not know how to “get” a main idea? Obviously not; it simply means that you do not have sufficient background knowledge about the game of cricket, or about dairy cows, to be able to understand the most important points in these texts. This is why it is so important to consider students’ prior knowledge when evaluating their performance on comprehension tasks.

Although there is little direct evidence regarding the role of prior knowledge as a factor in writing, common sense suggests that it would influence performance in analogous ways. Almost all views of the writing process, for example, involve a prewriting stage in which writers either activate existing topic knowledge or engage in experiences or information-gathering activities to expand knowledge. Authors can use only the voice they have or convey only the knowledge and experience they possess.

A basic fallacy of skills-based views of reading and writing is that skills are static across all reading and writing situations and that peoples’ skill performance under one set of reading and writing conditions is indicative of their performance under all reading and writing conditions. Clearly, this is not the case for us or for our students. Children do not have the same experiential background as adults, and the meanings they construct for a given piece of text may be different from the meanings constructed by their adult teachers or authors of instructional materials.

**Knowledge about Reading and Writing**

There are two major types of knowledge that influence students’ acquisition of and facility with reading and writing: **phonological awareness** and **metacognitive awareness**. Both of these factors are developmental; that is, in general, younger, less-experienced people have both quantitatively less and qualitatively different knowledge than older, more-experienced people. Both of these factors are also strongly implicated in the reading difficulties experienced by many students.

**Metacognition.** This term was introduced by developmental psychologists to refer to individuals’ knowledge about and control over their own learning and thinking activities (Flavell & Wellman, 1977; Paris, Wasik, & Van der Westhuizen, 1988).

Metacognition in reading and writing refers to one’s understanding of reading and writing processes. This understanding is revealed in two ways. First, it involves the learner’s knowledge of the nature of reading and writing; the purposes and goals of reading and writing; the various factors that influence reading and writing; and the what, how, when, and why of strategy usage in reading and writing. Second, learners’ understanding is reflected in the control they have of their actions while reading and writing for different purposes. Active learners monitor their own state of learning, plan strategies, adjust efforts appropriately, and evaluate the success of their ongoing efforts (Brown, Armbruster, & Baker, 1986; Raphael, Kirschner, & Englert, 1988).

Research suggests that skilled learners know a great deal about reading and writing, and that this knowledge influences their ability to select and use appropriate strategies and skills in different reading and writing situations. It is becoming increasingly clear that learners need several types of knowledge in order to become proficient. First, they need to
understand that a skill or strategy exists and is available to be used for reading/writing. For example, writers need to be aware that they can edit or revise their writing when it does not communicate their meaning clearly. Many young and less-skilled writers seem unaware of this aspect of skilled writing. This type of knowledge is called declarative knowledge and requires only that the child know that a skill or strategy exists.

Knowing that a particular skill or tactic exists is not enough for successful performance, however. Learners also need to know how to perform the skill or strategy. To continue with our example, it is not sufficient to know that you can change your writing to clarify meaning; you must also understand how to go about editing and revising. This type of knowledge is called procedural knowledge because it refers to knowledge of the procedures necessary to execute and orchestrate the components of the reading process.

In the past, it was assumed that declarative and procedural knowledge would ensure application, that students who knew about the components and how to apply them would surely use this knowledge in the appropriate reading situations. Almost daily, however, teachers encounter students who appear to have mastered a skill or strategy sufficiently to employ it but fail to demonstrate any such competence during real reading or writing situations. These children often fail to apply their existing skills and strategies because they lack a third type of knowledge, conditional knowledge (Paris, Lipson, & Wixson 1983). Simply stated, conditional knowledge is knowledge about when and why to employ a known strategy or skill. For example, skimming is obviously not a universally helpful approach to reading. Readers need to know when and why it is appropriate to use skimming. Conditional knowledge is essential for students to be able to apply the strategies and skills learned during reading and writing instruction in other reading situations.

Skilled learners possess a wide range of knowledge related to reading and writing, including knowledge of purposes and goals, various text factors, task requirements, and skills and strategies used in reading and writing. For example, they know that the purpose of reading and writing is “to make meaning” rather than “to say all of the words right” or “to write neatly.” Skilled learners also realize that reading and writing will be easier if they know a great deal about the topic of the text they are reading or writing and if they are interested in it. These examples may seem incredibly obvious, but there are many young and poor learners who do not have even these basic understandings about reading and writing.

Skilled learners also understand how various text factors can influence their reading and writing. Before we ever open a book or write the first words in a text, our knowledge of the type of text we are reading or writing influences the way we will read or write that text. We know about different kinds of texts such as encyclopedias, cookbooks, letters from friends, novels, newspapers, and so forth. We have expectations for how these texts are organized and for the types of information they contain, and this knowledge guides us in the selection of appropriate reading and writing strategies. For example, if you were reading or writing about a miracle cure for baldness from or for Scientific American, you would be likely to approach the task differently than if you were reading or writing about it from or for the National Enquirer.

Knowledge about the tasks that learners will be asked to complete in the course of reading and writing also affects strategy selection and usage. When we asked a group of fifth-grade students to tell us why they thought their teachers wanted them to work in their workbooks, one child responded indignantly, “Do you know what she [the teacher] did? She
gave us a test on the workbook. You’re not supposed to remember that stuff!” His response reflected his awareness that in many classrooms students need not remember the material in their workbooks; they must simply complete it and put it in the appropriate place.

Skilled learners also have knowledge about different skills and strategies for reading and writing and about how to use them (Paris, Wasik, & Turner, 1991). For example, they are aware of strategies for dealing with words and sentences they do not know (ask for help, use the dictionary, reread). They are also aware of the purposes for different strategies, such as planning or prewriting (it helps you get out all your ideas, you can see how your ideas go together). It is not sufficient to know what the strategies are and how to use them; learners must also know when and why to use them.

Skilled learners not only have a great deal of knowledge about reading and writing, but they can also apply that knowledge to monitor and regulate their reading and writing. There is evidence that they can adjust their strategies in response to different reading and writing situations (reading and writing for fun, reading and writing for specific ideas or for general impressions, studying) and that they use specific strategies to meet the demands of specific reading and writing situations (using different styles depending on their relationship to the intended audience of their writing). There is also a considerable body of knowledge that suggests that students with reading disabilities exhibit very little of these types of metacognitive abilities (Gersten, Fuchs, Williams, & Baker, 2002; Trainen & Swanson, 2005). In summary, students’ knowledge and control of reading and writing processes play an important role in their reading and writing performance.

**Phonological Awareness.** Over the course of their preschool years, most children become increasingly aware of the phonological structure of their language (see Chapter 7, “The Foundations of Literacy,” for a more comprehensive discussion of this aspect of reading development). Phonological awareness refers to children’s ability to divide sentences into words, break words into syllables, and identify common phonemes (e.g., recognize rhyming words). As we have already noted, in an alphabetic language such as English, it is essential to attend to the phonology of the language. Initially, children are likely to attend to word play, rhymes, and then syllables as units of sound. Eventually, however, children need to be able to isolate individual phonemes, the smallest distinguishable units of sound, within a word. This specialized aspect of phonological awareness is called phonemic awareness or phonemic segmentation (see Chapter 7). Because most children and adults attend primarily to meaning in spoken language, many young children do not acquire the idea that the sound structure is distinct from the meaning structure of the language until quite late in their preschool or their early school years. The majority of children do not acquire the ability to isolate (segment) phonemes until the age of 5 or 6 (Liberman & Shankweiler, 1979). There is additional research that suggests that phonological awareness, like other correlates, may be quite stable and linked to innate individual differences. A growing body of research has demonstrated that the vast majority of students who struggle in first and second grades can be taught to read with appropriate instruction (Dorn, 2011; McNamara, 2010; Scanlon, Anderson, & Sweeney, 2010; Vellutino, Scanlon, & Sipay, 1997). A very small number, however (called the “hardest to remediate” and totaling about 2 percent of all students), had a different profile of phonological awareness skills than other students. In particular, they were different in phoneme awareness and rapid naming tasks.
In their extensive review of research in this area, the Committee on the Prevention of Reading Difficulties in Young Children described the development of phonological abilities (Snow et al., 1998), concluding that phonological awareness is a strong predictor of subsequent reading achievement. They also conclude that early tests of phonological awareness may not always provide definitive information:

Phonological awareness in kindergarten appears to have the tendency to be a more successful predictor of future superior reading than of future reading problems. That is, among children who have recently begun or will soon begin kindergarten, few of those with strong phonological awareness skills will stumble in learning to read, but many of those with weak phonological sensitivity will go on to become adequate readers [emphasis in the original]. (Snow et al., 1998, p. 112)

This is likely because researchers have also demonstrated that the relationship of phonological awareness to development is “bidirectional, involving reciprocal causation (Ehri, 1979, 1987; Perfetti et al., 1987)” (Snow et al., 1998, p. 56). That is, children with good phonological awareness abilities learn to read more easily and quickly. However, learning to read (experiencing instruction focused on reading and writing) results in improved phonological awareness. Thus, although very strongly related to reading ability (and to language development in general), good phonological awareness is not a prerequisite to reading and should not be used to limit students’ access to good developmental instruction. On the other hand, there is also strong evidence to suggest that for students who need it, “instruction that heightens phonological awareness and that emphasizes the connections to the alphabetic code promotes greater skill in word recognition; a skill essential to becoming a proficient reader” (Blachman, 2000, p. 495).

### Attitudes and Motivation

Whether children perform or learn in a particular situation depends on whether they can do what must be done and whether they choose to do it (Adelman & Taylor, 1977). Learning and performance require both skill and will (Paris, Lipson, & Wixson, 1983). Factors such as interest, the amount of time and effort required, willingness to take risks, or perceived competence can influence children’s decisions of whether or not to use their skills.

The student’s attitude toward reading and writing is a central factor affecting reading and writing performance. Positive attitudes and motivation can compensate for relatively weak skills, and negative attitudes can prevent a student from applying existing knowledge or from acquiring new information (Paris, Olson, & Stevenson, 1983). Motivation is an especially serious concern for middle and high school students (Van Ritzin, 2011). For example, only one in three students at age thirteen, and one in four at age seventeen, reports reading voluntarily (Snow et al., 2005). Students’ motivation continues to decline throughout the middle and high school period.

Researchers have argued more recently that attitude is distinct from motivation, since students frequently report doing well on an academic task (e.g., reading) at the same time that they report disliking the activity (McKenna, Kear, & Ellsworth, 1995). These findings have resulted in a broader look at the purposes for which people engage in reading and
writing activities. It is clear that some people have an intrinsic motivation to read for enjoyment. At the same time, other purposes prevail, including a “learning goal orientation” and a “performance or ego orientation” (Guthrie & Wigfield, 2000). Readers with a learning goal orientation want to improve their reading skills, whereas readers with a performance orientation have a competitive desire to do better than others. Still other readers have social motivation for reading. Young children, especially, might want to spend time with their peers and interact with them in a common experience. Clearly, different goals might result in varied levels of motivation, depending on the tasks and settings.

Although few educators would dispute the relationship between motivation and achievement, the research establishing these links is somewhat mixed, largely because of differences in definition, student population, and subject area. Recently, researchers have begun to think of motivation and student engagement as mediating factors in school success (Guthrie & Wigfield, 2000; Wigfield et al., 2006). They suggest that the individual classroom context factors might not influence performance directly. Instead, the instructional methods, materials, and tasks determine or affect student engagement, and it is this student engagement that directly impacts performance and achievement. According to Guthrie and Wigfield (2000), engagement is a combination of motivation, conceptual knowledge, social interaction, and strategy use.

Research indicates that positive self-perception (or self-efficacy) promotes achievement-oriented behavior, whereas low self-perception leads to decreased motivation. In addition, positive attitudes and self-perceptions are associated with a sense of control over reading and writing successes and failures. Perceived lack of control can grow out of repeated and prolonged failure experiences. This can have a debilitating effect, sometimes called learned helplessness, which in turn causes a general expectation that all events that happen to the person are uncontrollable. The end result can be passive behavior.

Butkowsky and Willows (1980) demonstrated this cyclic pattern. The poor learners in their study had significantly lower initial expectations for success than did average and good learners, and when confronted with failure, they persisted at the task for shorter periods of time. However, it also appears that children’s beliefs about why they succeed or fail in reading and writing vary across reading and writing situations (Hiebert, Winograd, & Danner, 1984). Therefore, it is likely that learners’ willingness to exert effort will also vary from situation to situation.

**Correlates of Reading and Writing Performance**

There are a number of learner factors related to successful learning and achievement. These factors are frequently referred to as **correlates** of reading and writing ability/disability, because strengths and weaknesses in any of these areas are often correlated with reading and/or writing performance. When one or more of these correlates is strongly present in a student or a student population, these students may be considered **at risk** for school failure (Vacca & Padak, 1990). It is important to understand, however, that a high correlation between some learner factor and performance in reading and writing does not ensure that this factor is the **cause** of the high or low performance. The research thus far has yielded only equivocal findings regarding the causal relationships between most correlates and reading and writing success.
Although correlates of reading and writing achievement certainly can and often do influence students’ reading and writing, they may be much less critical than had previously been imagined. As Snow, Burns, and Griffin (1998, p. 24) explain:

In all populations, reading ability occurs along a continuum, and biological factors are influenced by, and interact with, a reader’s experiences. The findings of an anomalous brain system say little about the possibility for change, for remediation, or for response to treatment. It is well-known that, particularly in children, neural systems are plastic and responsive to changed input.

In the following sections, we briefly describe correlates of reading and writing performance in four major areas: social and emotional development, language development, physical development, and cognitive development.

**Social and Emotional Development.** An area related to attitudes and motivation is students’ social and emotional development. Students who have trouble adjusting to various social situations with peers and/or adults may experience academic difficulties. Students with emotional problems may also have difficulty concentrating in school, which often has a negative effect on their learning. However, it is frequently difficult to determine the extent to which emotional and social maladjustment are causes or results of reading and writing problems. Every poor learner is at risk for psychological disturbance, almost always because of but almost never as the cause of and often as a further contribution to poor reading and writing.

Research on the relationship between poor learners as a group and emotional or social difficulties is somewhat mixed, but it is certainly clear that individual students may exhibit reading and writing difficulties due largely to social or emotional problems (see Rock, Fessler, & Church, 1997). There are students for whom learning is made more difficult by family upheaval, by neglect, and by interpersonal problems in school. In addition, of course, physiologically based emotional problems (for example, from drug-related birth trauma) can lead to students who are easily discouraged or unable to relate to others, although it is increasingly clear that even students with these challenges can achieve high levels of success in literacy with the right instruction (Snow et al., 1998). At the same time, the research suggests that failure to learn to read may result in social-emotional difficulties (Arnold et al., 2005). Regardless of whether emotional or social problems are the cause or the result of reading and writing problems, if they are interfering with learning and performance, they must be considered in developing an instructional program.

**Language Development.** The acquisition of language competence is a major factor influencing subsequent reading and writing achievement. Indeed, the researchers at the Center for the Improvement of Early Reading Achievement have affirmed that “oral language is the foundation on which reading is built, and it continues to serve this role as children develop as readers” (Hiebert et al., 1998, Topic 1, p. 1). As children learn language, they develop abilities in understanding and producing speech. This development involves learning how their language is structured, how humans use language to communicate, and the specific words and rules of their own language.
All languages have certain characteristics, described earlier in this chapter, that children must learn or acquire (see also Chapter 7). Humans use language for a variety of purposes, and understanding the functions embedded in language is critical to comprehending and composing messages. The communicative functions include regulating other people’s behavior, expressing feelings, pretending and creating, conveying or obtaining information, and establishing and maintaining contact with others.

Children acquire language competence at varying rates and to varying degrees. With few exceptions, children will have mastered the language and communication patterns of their own families before entering first grade. Not all language and communication patterns are equally good matches with the demands of school settings, however. Children with delayed, underdeveloped, or merely different language skills are likely to have difficulty with conventional reading and writing. Indeed, one factor that is likely to place students at risk of school failure is limited English proficiency. Children’s knowledge of the structure of language forms the foundation for learning to read. If the child’s language differs significantly from the language he or she is encountering in books, the resulting mismatch will make initial learning difficult.

Although it seems obvious to point out that children will not easily learn to read a language they cannot speak, not all schools are equipped to provide the foundations in oral language that may be required for many students. Nor are many schools prepared to offer a rich multilingual experience that capitalizes on the knowledge and expertise of the larger community (Moll & González, 1994). Language and culture are strongly interrelated (Bernhardt, 2000; Ovando, 2005), which means that the aspects of context (culture, setting, etc.) influence learner factors as well as performance. The influence of context, in other words, can affect the learner directly or interact with learner factors (and other context factors) to influence performance. As Ruddell (1993, p. 325) has noted:

Regardless of whether students are learning English as a second language or a third (or fourth) language, much of what they bring to school from their primary language is a part of the beliefs, attitudes, behaviors, and values of their primary culture as well. To teach bi- and multilingual students effectively, we need knowledge and understanding of their language and culture, and the relationships between the two.

These are particularly challenging concerns for two reasons. First, the proportion of language-minority children and youth speaking a language other than English at home has dramatically increased from 6 percent in 1979 to 14 percent in 1999 (August & Shanahan, 2006). Second, these students are far more likely to experience significant reading and learning difficulties, leading to gaps in school achievement. For example, “despite the group’s progress in achievement over the past 15 to 20 years, [Hispanic] students are about twice as likely as non-Hispanic whites to be reading below average for their age” (Snow et al., 1998, p. 28). As described in August and Shanahan (2006), a survey of forty-one state agencies (Kindler, 2002) indicated that only 18.7 percent of the English language learners (ELLs) assessed scored above the state-established norms in English reading comprehension.

As young children are engaged in experiences with language, thought, and print, they gain an increasing awareness about what is required to accomplish literacy tasks.
Learning reading and writing, like most cognitive tasks, requires some degree of reflective ability, yet not all children have acquired appropriate abilities in this area. Some abilities, though potentially useful, are late in developing in all children (phonemic segmentation, for example). Because the assessment-instruction process needs to take these factors into account, we will return to the issue of language development in Chapter 7.

**Physical Development.** Within the area of physical development, there are several factors that may influence reading and writing performance; hearing and vision are two of these.

**Hearing.** There are several types of hearing loss. Some make it difficult for students to hear all sounds (measured by the intensity or loudness of sounds); others result in loss of hearing for particular sounds (or frequencies). Both of these types of hearing loss can occur in the same person, and hearing loss can occur in one or both ears. According to Richek, Caldwell, Jennings, and Lerner (2002, p. 347), “even a moderate loss in the ability to hear may substantially affect the ability to read.” Generally speaking, the vowel sounds of English are low-frequency sounds, and the consonants are high-frequency sounds; impairments in either area might affect students’ word recognition development.

An appropriate referral should be made if there is any evidence of impaired hearing, and if at all possible, the loss should be corrected before any further specialized instruction occurs. Hearing loss resulting from more-temporary physical conditions (for example, ear infections) can also interfere with learning and should prompt careful teachers to consider adapting their methods of instruction.

**Vision.** There are several types of visual impairments we need to be concerned about. People who are farsighted have difficulty in seeing objects up close, as when reading or writing. Nearsightedness, on the other hand, results in difficulties seeing distant objects, such as the White board. Astigmatism results in distorted visual images, which could lead to problems such as keeping one’s place while reading and writing. Other types of vision problems occur when the eye muscles do not work together in a smooth, coordinated fashion. These types of problems can result in fatigue and discomfort that interfere with reading and writing.

Research regarding the impact of these visual problems on reading and writing achievement appears to be equivocal. It seems that visual acuity and poor eye muscle coordination are “rarely the cause of poor reading” (Gunning, 2002, p. 52). In addition, visual problems that might make reading more difficult often go undetected, because the eye test that is commonly used in school screenings, the Snellen chart, is designed to detect only problems with far-point vision and not the near-point difficulties that might influence reading performance.

**Cognitive Development.** As children grow and mature, they acquire an increasingly sophisticated repertoire of cognitive abilities, including the ability to read and write. Developmental stages or shifts in perspective are often used to capture this changing and increasing knowledge base (Bruner, 1964; Piaget, 1960; Vygotsky, 1978). Both Piaget and Bruner describe growth during the preschool and school years as a process during which
children are moving toward the ability to transcend the present and think flexibly about the world. Teachers need to understand how their students think about their world so that they can provide experiences that are appropriate to children’s cognitive functioning and that move them to expand and restructure their knowledge.

Cognitive factors include development in the areas of perception, attention, and memory, as well as encompassing traditional notions of intelligence and verbal ability. Although it is beyond the scope of this text to consider each of these aspects in detail, each will be discussed briefly below to provide an awareness of the scope of the cognitive-developmental factors that may influence reading and writing achievement.

**Intelligence.** Intelligence generally refers to overall mental ability. Included in the construct of intelligence are such indicators of ability as speed of learning, ability to solve problems, and ability to engage in high-level thinking tasks. Although overall cognitive-developmental ability certainly influences students’ learning, the specific impact on the acquisition of literacy should not be overestimated. Snow, Burns, and Griffin (1998, p. 24) conclude, for example, that “the child’s intelligence, as long as it is in the normal range, does not have much of an impact on the ease of learning to read” (Stanovich, Cunningham, & Cramer, 1984).

Given the importance of judgments about intelligence in school settings, several points need to be made here. First, intelligence is a construct. That is, the components of intelligence are not readily observable. Indeed, there is substantial disagreement about what the components are. Most psychological authorities note that intelligence is actually grounded in culture and that different societies value different sets of skills and define intelligence accordingly (Okagaki & Sternberg, 1991). Recent conceptualizations of intelligence involve a more expansive consideration of the components involved in cognitive activity. Gardner’s (1983) set of multiple intelligences has been joined by others. Sternberg (1999), for example, suggests that intelligence involves five components: metacognitive skills, learning skills, thinking skills, knowledge (declarative and procedural), and motivation.

As Bransford, Goldman, and Nye (1991, p. 152) point out:

> A shift in the emphasis from academic intelligence to multiple intelligences carries with it the implication that intelligence is not a holistic trait that characterizes an individual. Thus, an individual might be relatively intelligent in school but relatively unintelligent in other contexts such as the auto repair shop and vice versa.

This supports the notion of an interactive view of learning and ability, rejecting the older view that intelligence was a relatively stable characteristic and, as such, was not susceptible to change via instruction.

On the other hand, certain abilities that are frequently measured on tests of intelligence but are not part of everyday definitions of intelligence may have significant implications for students’ reading development. For example, many poor readers complete rapid automatized naming (RAN) tasks, which require the ability to quickly name random letters or numerals, more slowly than capable readers. Increasingly, it appears that speed of processing, especially speed and flexibility in manipulating the phonological aspects of language, may affect students’ reading (Wagner et al., 1997).
Given this situation, caution needs to be exercised in attributing reading and writing problems to limited overall cognitive ability. In our multicultural society, it is possible for different types of behavior and knowledge to mean different things to different individuals. For example, some cultural groups take the aggressive display of information as totally inappropriate behavior—the mark of someone who is either not very smart or not very polite. Other groups teach children to provide creative, but not necessarily factual, answers to situational questions. Conclusions generated about intelligence in the absence of appropriate cultural context can be misleading.

Increasingly, it appears that intelligence can be influenced by certain experiences and instruction (Carnegie Corporation, 1994; Slavin, 1991). More important, there is an increased interest, not in static measures of intelligence as traditionally assessed, but in measures of potential to learn. The evidence to date suggests that measures of potential can contribute important information to the process of assessment and instruction, and we will return to these in Chapter 10.

Information-Processing Abilities. Student learning is also associated with the ability to process information in either written or spoken form. Attention, perception, and memory are all factors that influence learning and performance.

The ability and willingness to pay attention to important stimuli is a major factor in school success (Gage & Berliner, 1988). Human beings are surrounded by stimuli—that is, all aspects of the environment that are present to be learned, enjoyed, and noticed. Some students appear to have an exceptionally difficult time attending to school tasks and concentrating on print-related activities. Many of these students are being diagnosed with attention deficit disorder (ADD), sometimes also with hyperactivity (ADHD). The evidence regarding either the validity or the prevalence of ADD is controversial and inconclusive. The research does suggest that attention is very selective and is influenced by a number of other factors, including motivation, maturity, context, and instruction. For example, people focus more attention on unusual or unique stimuli (larger print, boldface, etc.). In other words, not all children who are inattentive have biologically based attention deficits. Clearly, whether because of biological disposition or for other reasons, if students cannot or do not attend to the parts of the environment that contain essential information, they cannot learn or retain new information and skills, and this issue should be examined during assessment.

The ability to impose order on sensory information is called perception. It too is central to student learning and performance in general. Perception, like attention and memory, is developmental. That is, important changes occur in this area during childhood and adolescence. Older children have more experience and knowledge, and this allows them to impose order on a greater array of stimuli, thus enhancing perception. Because reading is clearly a cognitive-perceptual process, many educators have assumed that reading difficulties arise from deficits in visual-perceptual processing. However, decades of research have demonstrated unequivocally that reading problems are not caused by such weaknesses. In reviewing the research in this area, Klenk and Kibby (2000, p. 671) concluded:

The validity of perceptual training programs as a method of improving reading has long been debunked . . . The conclusion from decades of research on this topic is abundantly
clear: Perceptual training programs, although perhaps increasing perceptual ability, have no substantive affect on reading ability.

Finally, the development of memory is an important aspect of cognitive information-processing ability. *Memory* is the process of storing and retrieving information. “The ability to retain verbal information in working memory is essential for reading and learning” (Snow et al., 1998, p. 108). Indeed, recent research suggests that young children’s ability to recall a short story that has been read aloud is more strongly related to their subsequent reading achievement than to scores on digit span, word span, or memory for pseudo-words (Scarborough, 1998).

As with all cognitive abilities, memory changes and develops over time. Older children are better at storing and retrieving information than are younger children, and adults tend to be better at this than children. Older children and adults clearly have better concept formation and a more elaborate network connecting concepts, which allows for better organization of new information. In addition, older children and adults tend to have better strategies for coping with information, and they are better at understanding what they need to do to remember information.

It is easy to see how individual differences in these areas of development can affect students’ abilities to cope with school tasks. It is also becoming increasingly clear that these cognitive abilities are not static. Attention, perception, and memory operate in relation to *specific types of information*. It is misleading to talk of children’s processing abilities without specifying exactly what it is they are trying to perceive and remember (Gage & Berliner, 1988). We see once again how culture, expectations, and experience can influence performance and potentially confound the measurement of these abilities.

**CHAPTER SUMMARY**

This chapter focused on the elements of skilled reading and writing performance, as well as the contextual and learner factors that influence performance. The first section of the chapter described skilled performance as the ability to use reading and writing effectively and creatively for personal, recreational, academic, and civic purposes. The elements of skilled performance were defined as comprehension; composition; vocabulary development; word identification and spelling; rate and fluency; and grammar, usage, and the mechanics of writing.

The second and third sections of the chapter identified and described the contextual and learner factors that influence performance. The contextual factors were grouped according to settings, instructional practices (standards and curriculum, methods, activities and routines, assessment practices), instructional resources (commercial programs, textbook and trade materials, and electronic texts). The learner factors were categorized as prior content knowledge, knowledge about reading and writing (metacognition and phonological awareness), attitudes and motivation, and correlates of skilled performance (social and emotional development, language development, physical development, and cognitive development, including the information-processing abilities of attention, perception, and memory). The correlates of performance were defined as those social, emotional, linguistic,
cognitive, and physical factors that are related to, but do not necessarily cause, strengths and weaknesses in reading and writing.

Consideration of the conventional aspects of reading and writing performance must be constrained by concerns for the ways in which learner and contextual factors interact to influence performance. Unless this complex and dynamic view of reading and writing is employed during assessment, we run the risk of developing a distorted picture of reading and writing processes. This poses serious problems for assessment, but even more serious concerns about the quality and appropriateness of instruction.

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