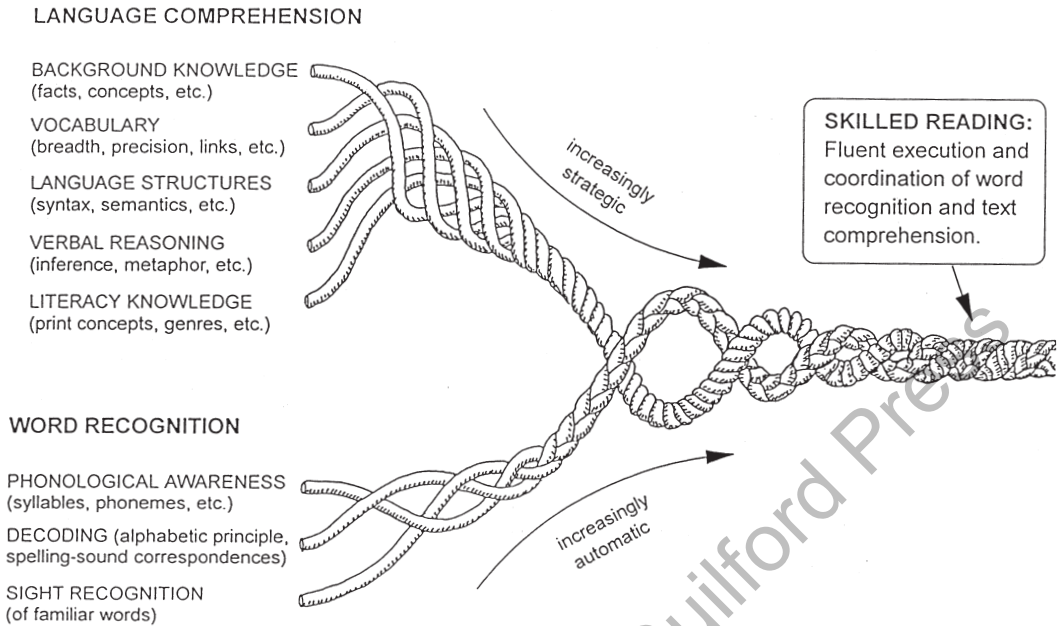
CHAPTER 1

Early Literacy Learning and the Interactive Strategies Approach

Reading is a complicated process. Theorists and researchers have been offering models intended to explain the process for decades. For example, in 1986 Gough and Tunmer offered their simple view of reading (SVR), which explains reading comprehension as being dependent on a combination of one's ability to read printed words and one's language comprehension. They argued that the relationship was multiplicative—reading comprehension (RC) is the product of word identification/recognition ability (WR) and language comprehension (LC). The formula they offer is RC= WR × LC. The implications for this model are clear. If an individual could not identify printed words at all, their reading comprehension would be 0. Similarly, if one had no ability to comprehend spoken language but somehow could decode the words (a highly unlikely possibility), one's reading comprehension would be 0. A more likely scenario, and one that characterizes learners who struggle with identifying printed words, is that reading comprehension would be impaired but likely not totally lacking. For example, limited ability with word reading, say 25% of what's needed relative to word identification for a given text coupled with 100% of the needed linguistic (spoken language) comprehension would result in limited reading comprehension (.25 × 1.00 = .25).

A widely recognized elaboration of the SVR is Scarborough's (2001) effort to "unpack" the two major factors in the SVR model, which she illustrates using what has come to be called the "reading rope." This model is presented in Figure 1.1. It carries over the two major contributing factors in the SVR and unpacks each factor—with the word recognition factor including phonological awareness (the ability to analyze spoken words into component sounds), decoding (the ability to "sound out" unfamiliar printed words), and sight recognition (the ability

LANGUAGE COMPREHENSION

BACKGROUND KNOWLEDGE
(facts, concepts, etc.)

VOCABULARY
(breadth, precision, links, etc.)

LANGUAGE STRUCTURES
(syntax, semantics, etc.)

VERBAL REASONING
(inference, metaphor, etc.)

LITERACY KNOWLEDGE
(print concepts, genres, etc.)

increasingly strategic

SKILLED READING:
Fluent execution and
coordination of word
recognition and text
comprehension.

WORD RECOGNITION

PHONOLOGICAL AWARENESS
(syllables, phonemes, etc.)

DECODING (alphabetic principle,
spelling-sound correspondences)

SIGHT RECOGNITION
(of familiar words)

increasingly automatic

FIGURE 1.1. Scarborough's (2001) reading rope elaboration of the simple view of reading (SVR). Copyright © 2001 The Guilford Press. Reprinted by permission.

to effortlessly identify printed words)—each illustrated as separate strands that become intertwined over time. The language comprehension factor includes strands for background knowledge, vocabulary, language structures, verbal reasoning, and literacy knowledge. These strands too are illustrated as becoming intertwined over time. Ultimately, the two major factors are intertwined to result in skilled reading in which word recognition and language comprehension are coordinated in an effective manner—thus enabling reading comprehension.

Both the SVR and the reading rope have much to offer in terms of helping us to understand reading comprehension through naming what skilled readers do; yet neither model is sufficient for addressing the complexity of the process of becoming literate. Importantly, neither addresses the instruction that facilitates this process. In contrast to the theoretical explanations of reading development embodied by the SVR and Scarborough's reading rope, the Interactive Strategies Approach (ISA) is an approach to literacy instruction and intervention that we've been researching and refining since the early 1990s. While certainly influenced by these and other theoretical explanations of how literacy develops, it is also influenced by years of observing teachers working with young children in classroom and intervention settings and by our own teaching of young children as well as teaching teachers (and future teachers). In the ISA, we address all the elements Scarborough identifies, and we also take explicit account of contextual and motivational impacts on literacy development. Even more importantly, we view the processes involved in literacy development as being much more interactive and reciprocal than the

theoretical models discussed above convey. In our view, development in one area influences and is influenced by development in other areas. The ISA addresses how individuals become literate, acknowledging unique contributions from within and beyond the learner, with an emphasis on instruction to facilitate the development of these processes.

Reading and Writing Are Complex Processes That Require Comprehensive and Responsive Literacy Instruction

We argue that reading is a complex process that requires the analysis, coordination, and interpretation of a variety of sources of information. In order to effectively meet the needs of literacy learners, especially those who experience difficulty, instruction needs to take account of this complexity. Consider, for example, what is involved in reading and understanding the simple text below:

> Amira is going to Emilia's party. She likes kites. Amira can bring her a kite.

To understand this text, the reader needs to be able to (1) read the words, (2) retrieve the words' meanings, (3) put the words together to form meaningful ideas, and (4) assemble a larger model of what the text is about (Kintsch, 1998). Because difficulties with any of these processes can result in reading difficulties, all of these important processes need to be considered when designing instruction to help children learn to read.

Because teachers are proficient readers and perform many, if not all, of these processes effortlessly, they are sometimes surprised by, and insensitive to, the complexity of the processes. By becoming more attuned to these complexities, teachers can become better able to provide instruction and guidance to students who are learning to read. To help teachers gain these insights, we begin with an (incomplete) analysis of what a reader might do while reading the text about Emilia's party.

Read the Words

All of the words in this text are known to proficient readers (with the possible exception of the proper names). They can identify them automatically with little or no conscious thought. As a result, readers can devote most, if not all, of their thinking to making sense of the text. For beginning readers and/or those who have difficulty with identifying printed words, however, some of the words will be somewhat or very unfamiliar, and they *will* have to devote thought to figuring out the words. Their success in doing so will depend on several things, including what they understand about how the writing system works (i.e., how the printed letters represent the sounds in spoken words) and their ability to make use of

other sources of information, such as the context in which the words occur. For example, if students attempted to "sound out" the word *is,* it would rhyme with *miss* rather than with *fizz*! Using the information provided by the letters in the words in combination with the context of the sentence, readers at an early point in development would be more likely to figure out the word.

Retrieve the Words' Meaning(s)

The meanings of words are usually accessed quite automatically while reading *if* the words are in the readers' spoken vocabulary and are accurately identified. So, for example, readers who know what a kite is will activate that knowledge when reading the word *kites*. In fact, having knowledge of kites is likely to allow readers to confirm that the printed word is, in fact, pronounced as *kites* rather than as *kit-es* or *kite-es*. For a word such as *can*, which has more than one common meaning (the container vs. the ability to do something), readers who can read the words in the text with relative ease generally become aware of only the meaning of the word that is signaled by the context.

The meanings of pronouns (*she* and *her* in the current example) often require the reader to infer to whom they refer. In the current example, it is not clear whether *she* in the second sentence refers to Amira or Emilia—a problem that might well slow engaged readers down as proficient readers generally infer the referent for pronouns quite automatically and effortlessly. Proficient readers would likely quickly resolve their uncertainty about the referent of *she* upon reading the third sentence. However, readers who are struggling to read some of the words in the passage may well have difficulty making the needed inferences because their cognitive resources are divided between attempting to identify the words and attempting to understand the meaning of the text.

Assemble Words to Form Idea Units

As noted, the context in which a word occurs helps readers identify (or confirm the identity of) individual words that are initially unfamiliar and, for words with more than one meaning, helps readers to identify the intended meaning of the word. One of the ways that context operates is through readers' knowledge of spoken language and the implicit rules regarding which words can follow one another (an aspect of syntactic awareness). For example, the verb meaning of *can* is selected in the sentence *Amira can bring her a kite* partly because, within a sentence in English, a noun is more often followed by a verb than by another noun (i.e., a container). Moreover, if in this sentence the proper noun *Amira* was followed by another proper noun (such as *Melissa*), there would be a comma between the two proper nouns—another signal to which proficient readers attend—mostly without conscious thought. Even when none of the words has multiple meanings, a hallmark of proficient reading (and listening) is that readers/listeners process the words in meaningful units or phrases. A meaningful unit might be a sentence,

if it is short enough, or it might be only part of a sentence—but the part would comprise a unit of meaning. For example, the sentence *She likes kites* might be processed as one meaningful unit because it is only three words long and presents a fairly simple idea (barring, of course, the complication regarding the referent of *she* in this example). However, the longer sentence *Amira was going to Emilia's party* might be processed as two meaningful units (e.g.,[1] *Amira was going [somewhere]* and *to Emilia's party*). Exactly how a sentence would be processed would depend on a variety of factors, including how familiar readers/listeners are with the general topic, how easily they can access the meanings of the individual words, how easily they can identify the individual words, and so on.

Assemble a Larger Model of the Text

By this point, readers of this chapter are likely growing weary of thinking about all the things that proficient readers do while reading just three fairly simple sentences. However, so far, the discussion has hardly touched on the major purpose of reading and what is, perhaps, the most complicated part of the process: to understand, interpret, and/or react to what is stated in the text. In order to fulfill this purpose, readers must relate the idea units to one another to form a conceptual and coherent understanding of the text that spans the sentences and taps readers' knowledge in ways that facilitate comprehension (Kintsch, 1998; Perfetti, Landi, & Oakhill, 2005). That is, while reading a text, readers "read" more than what is actually on the page, and how they understand the text depends on what they already know about the topic. So, for example, *if* they know something about birthday parties, readers may infer that Emilia's party is a birthday party because that is the kind of party to which one might bring a present. Conversely, readers not familiar with birthday parties might be somewhat confused. Readers are also likely to make some inference about Emilia's age because it is less likely that one would bring a kite to an infant or to an elderly adult. A discussion of the extent of thinking and inferencing that might go on relative to this little bit of text could be quite extensive. Some readers, for example, might construct a visual image of the two characters, including what they are wearing, what color hair they have, and so forth. The printed words stimulate readers to think and visualize. For fully engaged and proficient readers, the thinking generally goes far beyond what is literally stated.

The previous discussion is not intended to make anyone feel overwhelmed by what needs to be taught. Rather, the purpose is to help teachers more fully appreciate the complexity of the processes involved in reading and to develop insights into aspects of the process that may need explicit instructional attention and/or differentiation.

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[1]Many people do not know the difference in meaning between the abbreviations e.g. and i.e., but the distinction between them is important for understanding the information provided. E.g., stands for "exempli gratia" and means "for example." I.e. stands for "id est" and means "that is."

A Conceptual Model of the Complexity
of the Reading Process

While the example above introduces the notion of complexity of the reading process, we will next go into greater detail, relying on a graphic representation presented in Figure 1.2. We have found this graphic to be useful for talking about the complexity of reading in our work with teachers. It is important to note that as readers become increasingly proficient, all these processes are being attended to simultaneously, to a certain degree. Mastery of one process is not a prerequisite for developing another process, but rather development of one process frequently leads to development in another and vice versa.

Attend to the Graphic!

As you read through the description of the graphic, we strongly encourage you to refer back frequently to the graphic as it will help you to better comprehend the interactive and inter-related nature of the processes involved in development.

Comprehension and Knowledge are located at the center of Figure 1.2, as comprehension and knowledge development are the central reason for reading and
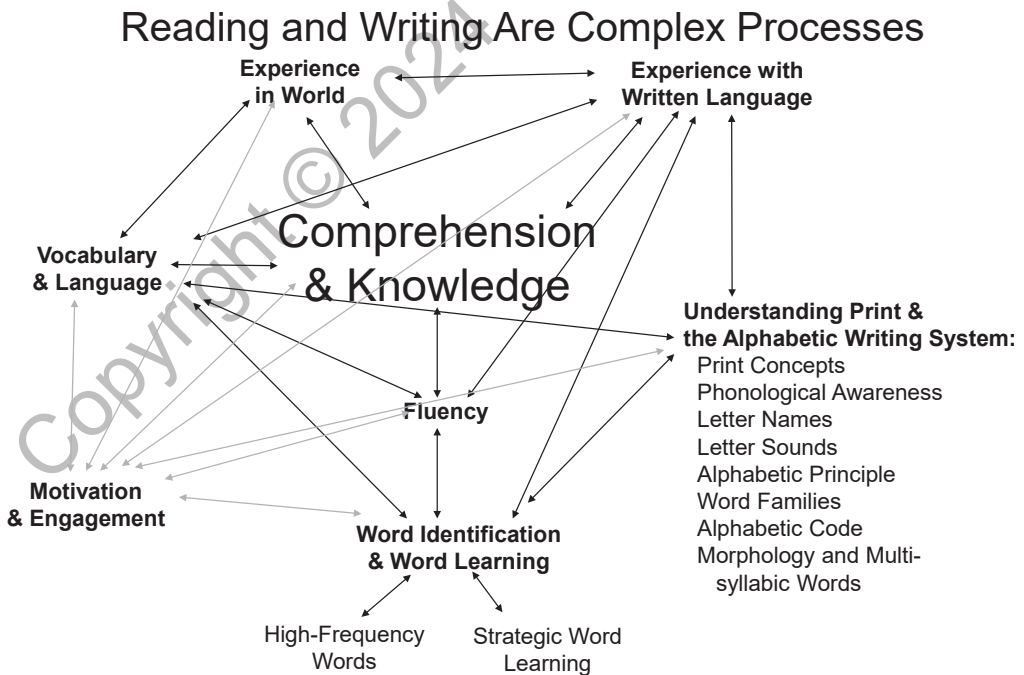
FIGURE 1.2. Conceptual model of reading and writing processes.

the two are inextricably linked. Comprehending a text allows the reader to build knowledge, and the readers' knowledge influences their ability to comprehend text. The more one knows about something, the more readily they can learn more about that subject through reading and/or listening to text. Comprehension and knowledge are influenced by and influence all the factors to which they are connected in the model, and most of the factors are reciprocally related to one another, as illustrated by the double-headed arrows. Here we discuss prominent interconnections but leave the reader to ponder the full complexity of the model and the processes. We discuss each aspect of the model in turn, beginning with **Vocabulary and Language** and moving around the model in a clockwise direction. However, it is important to keep in mind that the order in which we discuss the elements of the model *should not* be taken to suggest that there is an order in which the elements should be addressed instructionally. Rather, to a great extent, as we intend to illustrate with the double-headed arrows, virtually all the elements are developed more or less simultaneously—and in mutually supporting ways.

Obviously, in order to understand a text, a reader needs to understand the meaning of the vast majority of the words in the text and have sufficient skill with syntax (language structure) to be able to interpret the meanings of the sentences encountered. Knowledge of more diverse words and language structures may lead to stronger comprehension of texts. Thus, Vocabulary and Language skills influence Comprehension and Knowledge development. And the relationship is reciprocal. A reader's existing knowledge base and success in comprehending a text have the potential to build the reader's vocabulary and general language skills, as, generally, one encounters more sophisticated vocabulary and more sophisticated syntactic structures in text than in everyday spoken language. Further, research suggests that, once children are literate, most new words that become part of their spoken vocabularies are learned through engagement with written texts.

Experience in the World, obviously, builds knowledge. The experiences one has had will influence how one comprehends a text. For example, a child who has visited an aquarium and seen penguins will comprehend a text about penguins differently than a child who has never seen penguins. Reciprocally, a child who has read or listened to books about penguins prior to first seeing them in the flesh will have a different experience than a child who has no relevant prior knowledge. Further, as illustrated by the double-headed arrow connecting to Vocabulary and Language, Experience in the World influences and is influenced by one's vocabulary and language skills. To continue with the penguin example, a child who has read about and/or visited an aquarium with penguins has the potential to acquire vocabulary (and knowledge) related to penguins (e.g., flippers, insulation, icebergs, camouflage, Antarctica), and a child who has more advanced language skills is likely to be able to more effectively formulate questions (to be asked of adults accompanying them on a visit to an aquarium) that will elicit the desired information. They are also more likely to be able to comprehend the oral explanations that an aquarium guide might offer and the explanatory texts that may be

read to them by the accompanying adult. Indeed, vocabulary is often viewed as a proxy for measuring conceptual knowledge, such that a larger vocabulary related to a particular topic is associated with a larger fund of knowledge of that topic.

There are many, many interconnections and reciprocal relationships related to **Experience with Written Language**. We have already touched on the role of experience with written language as it relates to comprehension and knowledge, experience in the world, and vocabulary and language skills. Such experience also influences and is influenced by skill with **Understanding Print and the Alphabetic Writing System**. In Figure 1.2, we list multiple aspects involved in coming to understand print and the writing system (each of which will be discussed in detail in Part II of this book). For now, it is useful to reflect on the fact that when young children engage with written language through reading and writing, their understanding of the workings of the writing system expands. Reciprocally, readers and writers who have greater understanding of the workings of the writing system will have different experiences with written language than will those with more limited understanding. For example, children who are at an early point in development may represent only the beginning sound of a word with a letter when writing, whereas children with greater knowledge of the alphabetic code and greater phonological awareness are likely to more fully represent the sounds in words they attempt to write. Children at these different points in development are apt to have different senses of the utility of print as a result of the reactions of their readers, who will either mostly understand what the writer has written or be fairly clueless about the message.

Unlike the other elements illustrated in the conceptual model (Figure 1.2), we do not view having an Understanding of Print and the Alphabetic Writing System as having a direct and reciprocal relationship with Comprehension and Knowledge. Rather, while it is clearly critical for readers and writers to develop skill with the writing system, the impact on comprehension and knowledge is indirect—through the process of **Word Identification and Word Learning**. Thus, for example, knowledge of the workings of the writing system enables the reader to more effectively solve unfamiliar words encountered while reading, and this more effective word solving enables development of Comprehension and Knowledge. Reciprocally, **Strategic Word Solving**, which for beginning readers often requires use of both alphabetic and contextual information to confirm the identity of unfamiliar words (Share, 2008), has the potential to help the student learn more about the alphabetic code. For example, upon having effectively puzzled through words such as pizza and piano, and across a variety of contexts, the child might learn, at least implicitly, that the letter *i* is sometimes pronounced like a long-*e*.

Knowledge of **High-Frequency Words** is also reciprocally related to Word Identification and Word Learning. Knowing some of the most frequently occurring words (e.g., the, to, and, in, is) enables the reader to more effectively draw on context to help identify unfamiliar words, and some high-frequency words may be added to a reader's sight vocabulary through effective word solving while reading.

The relationship between **Fluency** and Comprehension and Knowledge is also reciprocal in nature. In a reading context, fluency refers to the rate with which

words are identified, as well as the reader's phrasing and intonation. In order to impose the proper intonation and phrasing during oral reading, the reader must comprehend what is being read—at least at the level of the sentence. At the same time, being able to quickly and accurately identify words, the skill that contributes to the rate aspect of fluency, enables comprehension by freeing up thinking skills (cognitive resources) to devote to the process of understanding the meaning of the text rather than to figuring out the identities of unfamiliar words.

It is also important to note that increases in learners' Understanding of Print and the Alphabetic Writing System as well as their Word Identification and Word Learning have the potential to enable them to communicate through writing for both social (interpersonal) reasons and documentation of their learning in the content areas.

The last factor in the model, **Motivation and Engagement**, has a pervasive and reciprocal relationship with all the other factors; note that there are arrows depicting reciprocal relationships with all the other elements of the complex model. Indeed, we view Motivation and Engagement as so important that we devote an entire chapter to developing motivation and engagement early in this book and revisit the topic often throughout the remainder of this text—reminding readers frequently of the power teachers have over children's attitudes toward reading and writing and their beliefs about themselves as literate individuals. Learners who believe that reading and writing are enjoyable, informative, and "doable" are more likely to be motivated by and engaged in learning opportunities and are more likely to profit from them. For example, they are more likely to ask questions and seek answers, and they are more likely to persist productively in the face of learning challenges, regulating their emotions in ways that enable them to engage in the word solving and/or comprehension challenges they encounter rather than becoming frustrated and/or avoidant.

Self-Regulation

Another element that has fairly pervasive influence on literacy learning and dispositions is *self-regulation,* which involves such things as maintaining attention and monitoring errors (Hanno, Jones, & McCoy, 2020). To an extent, it could be considered to be an element of the Motivation and Engagement component—which is also related to virtually all aspects of the complex model. The research suggests that there are both cognitive and behavioral aspects of self-regulation. The cognitive aspect of self-regulation includes processes that support goal-directed behavior, including:

• **Inhibitory control**, which is the ability to inhibit a dominant response in favor of a nondominant response. For example, in the primary grades, when reading a beginner-level book, a child trying to identify the printed word *dog* might be inclined to say *puppy* based on the picture but would need to inhibit that initial inclination and attend to the letters in the printed word instead.

- **Working memory,** which involves the ability to store information and revise or update one's understanding as new information becomes available. In the primary grades, that might, for example, involve revising one's understanding of a text as new information in the text unfolds.

- **Attention/task shifting** (also referred to as *cognitive flexibility*), which involves the ability to shift one's attention and respond to different aspects of a process. For example, while writing a text, authors in the primary grades may need to shift attention between meaning construction and how individual words might be spelled.

These cognitive processes are often referred to as *executive functions* and are thought to contribute to children's ability to successfully engage in literacy-learning activities.

The behavioral aspect of self-regulation involves effortful control, which Hanno et al. (2020) define as "behavioral regulation in the context of emotional arousal, marked by the ability to forego a dominant thought, emotion, or response (i.e., an impulse) in favor of the subdominant (i.e., intentional response)" (p. 280). In the primary grades, this might, for example, involve thinking about how to solve a dispute with a classmate over possession of a desired object rather than simply grabbing the object. Behavioral self-regulation is thought to contribute to children's ability to form positive relations with peers and teachers, thereby enhancing the quality of the learning environment.

There is evidence that, for children who demonstrate weaknesses in self-regulation in the preschool and primary grades, the development of early literacy skills and later reading comprehension can be negatively impacted. Examples of how to promote the development of self-regulation skills related to the components of the complex model will be offered in several of the upcoming chapters that address various aspects of literacy development.

Children Who Experience Difficulty with Literacy Development

Children vary considerably in the ease with which they learn to read. Some learn with comparatively little instructional guidance, whereas others find it to be a nearly impossible undertaking given the instruction typically offered in schools. In this book, we focus particularly on children who experience difficulty. We have known for many years that children who lag behind their peers in early literacy development are at high risk of experiencing prolonged reading difficulties (Francis, Shaywitz, & Steubing, 1996; Hernandez, 2011; Juel, 1988; Phillips, Norris, Osmond, & Maynard, 2002; Prochnow, Tunmer, & Chaptman, 2013; Rayner, Foorman, Perfetti, Pesetsky, & Seidenberg, 2002) and, potentially, of being identified as learning (or reading) disabled or dyslexic. Research comparing children

who find literacy learning challenging and those who become literate with comparative ease has identified critical areas that differentiate the groups. Much of that research was comprehensively summarized in the book *Preventing Reading Difficulties in Young Children* (Snow, Burns, & Griffin, 1998), in an article by Vellutino, Fletcher, Snowling, and Scanlon (2004), and more recently in an article by Castles, Rastle, and Nation (2018). Similar findings emerged in two major reviews published by the National Reading Panel (2000) and the National Early Literacy Panel (2008).

Based on this body of research, there is a fairly strong consensus about the most common areas of difficulty that affect learners who have problems developing literacy skills and about the role of instruction in preventing long-term difficulties. Reading and writing are language skills, and, by far, the most consistent findings in the research on literacy learning point to difficulties with aspects of language processing. Difficulties with the phonological aspects of the language system are the most common reason why learners are identified as experiencing difficulties with early literacy development. These children have difficulty in developing the ability to notice and manipulate the sounds in spoken words and in connecting individual sounds in spoken words with their printed representations. At early points in literacy development, learners use these phonological skills when they are attempting to identify unfamiliar written words or spell words for which they haven't yet learned the conventional spelling. The good news is that there is strong evidence indicating that difficulties with phonological processing, especially when identified in the early primary grades, can often be remediated instructionally, thereby reducing the chances that learners will experience long-term difficulties. A focus on the primary grades is important for multiple reasons including the potential motivational impact of experiencing difficulties and the lost opportunities to engage in the extensive amounts of reading (and writing) progressively more challenging text that ultimately enables learners to become proficient readers and writers. When children do too little reading, they have too few opportunities to learn to connect printed words with their spoken representations (a process referred to as *orthographic mapping*; see Chapter 2). As a result, even when their phonological processing skills are remediated, they may not achieve the level of reading fluency needed to enable them to focus fairly exclusively on comprehending text.[2] Approaches to addressing phonological processing difficulties and ensuring that children have ample opportunity to apply phonological skills while reading, and thereby have the needed opportunities to engage in orthographic mapping, are major foci of this text.

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[2]There is an ongoing debate among literacy researchers about whether fluency difficulties are due to limited early reading experience or to a distinct problem with orthographic mapping (OM)/naming speed (as measured by rapid automatized naming [RAN] tests; Fletcher, Lyon, Reid, Fuchs, & Barnes, 2019). There is no evidence that efforts to improve RAN have any impact on reading development. However, there is evidence that helping learners develop proficiency with orthographic mapping and engaging them in lots of reading of meaningful text can improve fluency. Therefore, we do not treat the OM/RAN hypothesis as a distinct problem.

In addition to phonological processing difficulties, multiple additional factors can and do impact literacy learning such as:

- Deep and rich knowledge of the meanings of spoken words,
- The ability to understand the meaning of syntactic structures[3] that tend to be more complex in written as compared to spoken language,
- The background/world knowledge that enables interpretation of information encountered in school settings, and
- The similarities and differences between one's spoken language and the language used in school and in books . . . just to name a few.

Instruction to prevent and remediate literacy learning difficulties would, ideally, take account of all these potential sources of difficulty. The latter skills tend to have their greatest impact on reading comprehension skill (e.g., Lyster, Snowling, Hulme, & Lervåg, 2021; Perfetti & Stafura, 2014). For example, when measured at the preschool and/or primary level, vocabulary is one of the best predictors of reading comprehension in late elementary grades and throughout schooling (e.g., Lyster et al., 2021; Scarborough, 2001; Storch & Whitehurst, 2002). That is, in general, children who have poorly developed vocabulary knowledge when they are young are apt to have greater difficulty comprehending the things they read when they are older (Cain & Oakhill, 2011; Cunningham & Stanovich, 1997; Quinn, Wagner, Petscher, & Lopez, 2015b). Here again, early efforts to intervene can be effective in reducing the risk of long-term reading difficulties.

The Contribution of Classroom Instruction

Characteristics of instruction have a substantial influence on the development of literacy skills. That is, essentially, the reason for this book. For example, Dickinson (2001) reports that, in preschool settings, the amount and quality of the language used by teachers, the kinds of verbal interactions that occur in the classroom, and, more specifically, the types of interchanges that occur during read-alouds influence the development of spoken language skills, including spoken vocabulary knowledge (see Barnes, Grifenhagen, & Dickinson, 2021, for guidance on the development of young children's language skills).

As another example, Connor et al. (2011) found that, in first grade, classroom teachers who differentiated instruction based on the skills of their students were more successful in moving all of their students forward than were teachers who did not differentiate instruction based on student skills. Further, our own research has documented a relationship between classroom practice and student outcomes in

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[3]Syntactic structures have to do with the ordering of words in sentences. *The black-haired boy won* and *The boy with black hair won* are two different syntactical structures. The two sentences mean the same thing, but the latter is more syntactically complex.

observational studies (Scanlon & Vellutino, 1996, 1997) as well as in contexts in which we provided professional development for classroom teachers with the intent to influence instructional practices in efforts to reduce the incidence of reading difficulties (Scanlon et al., 2008; see also Scanlon & Anderson, 2020). The Scanlon et al., 2008 study, which was conducted in several different school districts, with each district using different reading/literacy curricula, was successful in reducing the number of children who experienced reading difficulties. The content of the professional development provided to classroom and/or intervention teachers is the foundation of this book, although we have updated topics/chapters based on the research that has been published in the intervening years.

Alert!

Years of working with learners at various levels of development have helped us (and those who research how individuals learn from written material) to understand that when some individuals read informational texts such as textbooks they miss important and clarifying information that is presented, clarified, and/or emphasized in text boxes (like this one), captions, graphs, inserts, and/or photos. As teachers of literacy learners, we encourage you to do what you want your students to (learn to) do—make full use of the information provided.

Throughout this book, we will make use of text boxes, graphics, and tables to emphasize, clarify, and, at times entertain via anecdotes. Ignoring such text features will likely significantly limit the knowledge gained from reading this or any text. As current and/or future teachers, we hope you will attend to these features in your own reading and remember to emphasize the importance of these resources in your instructional interactions.

The general point is that the nature and quality of classroom instruction can play a substantial role in preventing literacy learning difficulties. Further, summaries of research compiled by multiple research groups over the years (e.g., Chall, 1967; Snow et al., 1998; Tivnan & Hemphill, 2005) have generally concluded that teacher knowledge and practice, rather than the programs teachers use, are among the most (or *are* the most) important in-school factors in determining students' literacy outcomes.

The Role of Intervention/Prevention

A substantial body of research has established that primary-grade children who demonstrate literacy learning difficulties can be helped to catch up to their grade mates when they are provided with additional instructional supports (intervention) (e.g., Brown, Denton, Kelly, Outhred, & McNaught, 1999; Center, Wheldall, Freeman, Outhred, & McNaught, 1995; Coyne, McCoach, Loftus, Zipoli, & Kapp, 2013; Gomez-Bellenge, Rogers, & Fullerton, 2003; Mathes et al., 2005;

O'Connor, 2000; O'Connor, Harty, & Fulmer, 2005; Scanlon et al., 2005, 2008; Torgesen et al., 2001; Vaughn, Linan-Thompson, & Hickman, 2003; Vellutino et al., 1996, 2008; Wanzek & Vaughn, 2008; Wanzek et al., 2018). Such efforts often involve the implementation of appropriately targeted and intensified instructional interventions.

Recently, the types, intensity, and responsiveness of interventions have drawn researchers' attention as efforts are made to optimize instruction to reduce the incidence of literacy difficulties. This more recent research suggests that, especially for the children who experience the greatest difficulties learning to read, responsive instruction is critical (Coyne et al., 2013; Simmons, 2015; Wanzek et al., 2018). By responsive, we mean instruction that takes into account what the children currently know and what they are ready to learn next, as opposed to instruction that is the same for all students in a particular grade or setting, regardless of their skills or their progress.

Multilingual Learners and the ISA

In the past few decades, there has been a dramatic increase in the number of students in U.S. schools who are identified as *multilingual learners* (MLs).[4] As of 2019, the U.S. Department of Education estimated that MLs constituted approximately 10.4% of the public school population and, by all estimates, that number is growing. Goldenberg (2020) recently summarized the research on what is known about instruction for children who need to rely on school to help them learn to speak and read the English language. He concluded that "[w]hat is known about effective literacy instruction for non-ELs is the foundation of effective literacy instruction for ELs" (p. S139) and that "learning to read in a language with an alphabetic orthography such as English is very similar for English speakers and for ELs" (p. S139). In addition, he concluded that schooling should place emphasis on helping ELs (MLs) to develop their oral English—especially the vocabulary they are learning to read and, as they progress, academic language in general.

In our research on the ISA, because of the locale and the time at which the research was done and the populations served by the schools that agreed to participate, we did not have the opportunity to explicitly evaluate the effects of the ISA on MLs' (English) literacy development. However, our reading of the research on how to help MLs develop oral as well as written language skill in English suggests that the instructional practices that we advocate are aligned with what the research suggests, albeit sometimes with some modifications that are responsive to the children's first language. We briefly discuss these modifications in the relevant chapters.

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[4]A variety of terms are used to refer to individuals who are learning English as an additional language, including English learners (ELs), English language learners (ELLs), multilingual learners (MLs), and emergent bilinguals (EBs). In this text, we will use the term MLs except when providing direct quotes, in which case we will use the term utilized by the authors of the piece being quoted.

The Interactive Strategies Approach
to Instruction and Intervention

We began our efforts to prevent and remediate reading difficulties in the 1990s, when we developed the first iteration of what came to be called the Interactive Strategies Approach (ISA). We have revised and updated the approach through a series of four studies in the primary grades and two intervention studies in the intermediate grades. These studies were recently summarized in an article by Scanlon and Anderson (2020).

We refer to our approach as the Interactive Strategies Approach (Vellutino & Scanlon, 2002) to reflect the fact that, to comprehend a written text, the learner needs to draw upon multiple types of knowledge in *interactive* and *confirmatory* ways in order to accurately identify written words, compile the words into meaningful sentences, and ultimately, integrate information across sentences and with the learners' existing knowledge base. For the beginning reader and for older readers who struggle with the word-identification process, many of the words they encounter while reading are likely to be unfamiliar in their written form. Thus, they need to develop ways, which we refer to as strategies, to figure out those words. Clearly, they need to think about the sounds that the letters and letter patterns represent and blend them together to try to form a meaningful word. They also need to check whether the word they come up with makes sense in the context in which it is encountered. If it doesn't, they would, ideally, try different pronunciations for the word using the written form in combination with the context in an interactive way. While the letters and letter patterns allow the reader to hypothesize about the likely pronunciation/identity of unknown words, the reader's knowledge of spoken words as well as the context in which the unknown word is encountered can help to determine whether the word has been accurately identified. Thus, we view literacy development as being an interactive and strategic process—hence the name.

Research-Based versus Research-Tested Instruction

As schools are called upon to implement research-based instruction, it is important to consider the distinction between "research-based" approaches and "research-tested" approaches. Many instructional approaches that are identified as *research-based* (and as being aligned with the science of reading [SOR]) are simply that—based on research. No authority controls the use of that label. The label can be attached to products or programs if the developers have familiarized themselves with (some of) the research related to particular instructional goal(s) and then based their program on what was learned in that research. Therefore, just because an approach or program is *based* on research *does not,* in any way, ensure that it will work to improve literacy outcomes in a given context or at all.

The approach to instruction we detail in this book has been research-tested. In our 2005 and 2008 studies, which were conducted in middle-income and

high-needs school districts, we compared literacy performances among primary-grade children who were randomly assigned to receive instruction from teachers who had participated in the ISA professional development offerings with that of children who received the instruction normally available to them in their schools. We consistently found that, as a group, the children in the ISA conditions outperformed children in the comparison groups. Further, our earliest intervention study (Vellutino et al., 1996) has been identified as a "game changer" with respect to how educators might fruitfully address the needs of early literacy learners who struggle (Kilpatrick, 2020). As Kilpatrick noted, our 1996 study demonstrated that students who experience reading difficulties in the early grades can develop average, or near average (and sometimes better than average), performance if provided with appropriate instruction/intervention as first graders. The Scanlon et al. (2005) study that followed extended those findings by beginning ISA-based instruction in kindergarten. This latter study is cited heavily in the U.S. Department of Education Practice Guide, *Foundational Skills to Support Reading for Understanding in Kindergarten through 3rd Grade* (Foorman et al., 2016).

Characteristics of the ISA

The ISA is an *approach* to early literacy instruction, not a program. It is not tied to particular instructional materials, nor does it provide highly scripted instructional interactions. Rather, the ISA offers a way to conceptualize (early) literacy development and to support children as they learn to read and write as well as use spoken language in increasingly sophisticated ways. We view teachers as professionals who use their knowledge of their students' skills and abilities, in combination with knowledge of their curricula and the processes involved in literacy development more generally, to plan and deliver effective and responsive literacy instruction. Although we do make some suggestions for instructional materials that are illustrative of the types of materials we have found to be useful, and we do offer some of these in a freely downloadable form on the book's companion website (see the box at the end of the table of contents), we also offer ideas for how teachers might evaluate and utilize the materials they have available to more effectively meet the needs of their students—particularly those who find it challenging to learn to read and write. Our primary goal in this book is to help teachers more thoroughly understand early literacy development and, thereby, to effectively respond to, plan for, and teach primary grade learners.

The ISA places particular emphasis on meeting the needs of children at the early stages of learning to read and write, especially those who experience difficulty, through careful analysis of children's literacy skills and provision of instruction that is responsive to their current capabilities. In order to provide such responsive instruction, teachers need to become highly knowledgeable about early literacy, how it develops, and how to respond to literacy learning difficulties. Therefore, the development of teacher knowledge related to early literacy development is a major focus of the ISA and thus a major focus of this book.

The name of the approach conveys the importance placed on helping children become strategic in their reading and writing endeavors. From our perspective, the goal of instruction should be to teach foundational skills (i.e., phonemic awareness, phonics, and high-frequency words) and strategies that children will learn to use independently, flexibly, and interactively while reading and writing. Through this active and thoughtful engagement, children will grow as readers and writers. An important goal of instruction is to help children develop a *self-teaching mechanism* (Share 1995, 2008) that will enable them to learn more about written language through engagement in the processes of reading and writing. To facilitate self-teaching, instruction needs to help learners develop the foundational skills needed to enable them to solve unfamiliar words encountered while reading and to at least approximate the spellings of words they want to use in their writing. Drawing on these phonological skills, children need to be provided with guided practice in reading and writing in contexts that are motivating and using materials that are interesting, personally meaningful, and manageable (meaning not too difficult).

The logic behind the ISA stems from what we know about the development of certain reading-related skills and the young child's ability to comprehend written text—which is, after all, the reason for reading. For children in the primary grades, the ability to comprehend written material is heavily dependent on their ability to accurately and quickly identify the words in the text. This is true partly because many of the materials that primary-grade children read are not very challenging conceptually. Of course, when children do encounter reading materials that are conceptually challenging, fast and accurate identification of most of the words in the text is still an important determinant of comprehension. However, the child's general world knowledge, language skills, and active thinking about the meaning of the text are also important determinants of comprehension.

In discussing the ISA, we are often asked to indicate how it differs from other approaches to early literacy instruction and intervention. If teachers experienced in using the ISA were asked this question, they would most likely talk about the approach to helping young children learn how to effectively puzzle through and identify unfamiliar words encountered while reading. We advocate explicitly teaching children a small set of word-solving strategies and coaching them in their use. The goal is for the children to become so effective and independent in word solving that, over multiple encounters with the same printed word they learn to read the word effortlessly. Becoming effective word solvers, over time, enables children to learn to read the huge number of words that proficient readers ultimately know.

If we were asked the same question, we would agree that the approach to teaching word-solving strategies is the most obvious difference between the ISA and other comprehensive approaches. However, we would add that while the approach to teaching about phonological analysis and phonics skills for the purpose of enabling word solving and spelling is explicit and thorough, we are much more attentive to the need for children to learn to be flexible in their decoding attempts due to the variable nature of many English spellings (e.g., the long-*a* sound can be represented in print in multiple ways: *cake, play, break, train*, and *ballet*, to name a few). We

would also argue that the attention given to enhancing children's language skills and world knowledge and to the impact of these knowledge sources on both oral reading and comprehension distinguishes the ISA from many other approaches to early literacy instruction, which, in our opinion, tend to pay too little attention to these important contributors to comprehension. Finally, we would add that, unlike some approaches, the foundational principles upon which the ISA is built are applicable across both classroom and intervention settings.

The ISA, Response to Intervention, and Multi-Tiered Systems of Support

As a result of the extensive research on the effectiveness of instructional enhancements in preventing long-term literacy difficulties that might otherwise lead to a child being identified as learning/reading disabled, in the past few decades there has been a major conceptual shift in thinking about how schools and teachers should respond to children who demonstrate such difficulties. In the past, children who were judged to be otherwise "normal" (to use the terminology of that era) but who lagged seriously behind their peers in the development of reading and other literacy skills were often identified as being (learning/reading) disabled. However, it is now widely recognized that children's ability to become literate is the result of a complex interaction between the underlying characteristics of the learner and the learner's prior experiences and the amount, type, and quality of the instruction provided (Fletcher, Lyon, Fuchs, & Barnes, 2019). Although it is certainly recognized that some children need more instructional guidance to learn to read and write and that some, in fact, need very intensive and individualized support, we now recognize that nearly all children who are not hampered by severe intellectual, perceptual, or emotional difficulties can develop reading and writing skill. As a result of this shift in thinking, the United States' 2004 Individuals with Disabilities Education Improvement Act (IDEIA) encourages schools to identify children who appear to be at risk of experiencing learning difficulties early in their schooling and to begin intervention in efforts to ameliorate those difficulties. Further, information about children's response to instruction/intervention is used in determining whether they should ultimately be identified as learning/reading disabled (or dyslexic in some settings). This process is widely referred to as *response to intervention* (RTI; National Association of State Directors of Special Education, 2005). An important advantage of an RTI process is that it has the potential to prevent children from experiencing long-term learning difficulties because efforts to intervene are instituted before learning gaps have a chance to grow and become disabling. As a result, the process has the potential to reduce the number of children who may be inaccurately identified as learning/reading disabled due to inadequate instructional experiences.

Multi-tiered systems of support (MTSS) is a more recent development with regard to responding to the needs of learners who struggle. It incorporates RTI's focus on instructional concerns but takes a broader approach by attending to a greater range of factors (especially behavioral factors) that may be impacting

children's ability to learn. To us, this is very much a welcome shift but one we will not discuss in detail since our focus is on the instructional components in an RTI process, particularly regarding how they pertain to literacy.

The most widely recognized model of RTI utilizes a tiered approach to implementation. This approach (as described by Fuchs & Fuchs, 2006) entails (1) universal screening of all children, (2) identification of children who appear to be at risk of not meeting grade-level expectations and closely monitoring their progress, and (3) gradually increasing or decreasing the amount and/or intensity of instructional support offered based on student progress.

The National Joint Committee on Learning Disabilities (NJCLD, 2020) describes RTI as a "response-based problem solving process" (p. 196). While many different models of RTI implementation exist (Scanlon, 2011), most models involve three or four tiers of intervention, with Tier 1 encompassing instruction provided by the classroom teacher, Tier 2 involving more intensive and, often, more expert instruction provided beyond the classroom (and preferably *in addition* to Tier 1 instruction), and Tier 3 (and perhaps Tier 4) providing even more intensive intervention.

Since passage of the IDEIA legislation in 2004 and the issuance of the accompanying regulations (Yell, Shriner, & Katsiyannis, 2006), much has been written about the RTI process (e.g., Balu et al., 2015; Fuchs & Vaughn, 2012; Gersten et al., 2008; Hendricks & Fuchs, 2020). Much of the practitioner-oriented literature has focused on the broad frameworks for RTI approaches and on the demands of the record keeping needed to document interventions and progress. In fact, especially in the early years of RTI implementation, instructional recommendations were often limited to advice to adopt research-based programs and to implement them with fidelity (e.g., Brown-Chidsey & Steege, 2005; Mellard & Johnson, 2008). In many instances, teachers were expected to provide more or less scripted programs without adjusting to what the children were learning (or not learning). However, research on instructional effectiveness suggests that it is what teachers do rather than the programs they use that is the most important determinant of children's achievement (Duffy & Hoffman, 1999; Konstantopolous & Sun, 2012; Nye, Konstantopolous, & Hedges, 2004; Scanlon et al., 2008; Tivnan & Hemphill, 2005), and there is a developing consensus in this regard as articulated by the National Joint Committee on Learning Disabilities (2020): "A data-based problem-solving approach in schooling is at the heart of all good instruction and intervention. Educators should continually monitor student performance and behavior and adapt instruction and support to meet individualized student needs" (p. 199). Consistent with this approach, some recent studies of the effectiveness of RTI indicate that child outcomes are improved when the intervention they receive is more responsive to what they know and are able to do (Al Otaiba et al., 2014; Coyne et al., 2013; Simmons, 2015) rather than being highly scripted and delivered with strong adherence to a script (fidelity). Further, a practice guide focused on intensive interventions issued by the Center on Instruction (Vaughn, Wanzek, Murray, & Roberts, 2012) drew on existing research in providing guidance related

to intensifying interventions through (1) the use of strategies that promote cognitive processes, (2) delivering more explicit and systematic instruction in addition to increased opportunities for feedback, (3) providing additional instructional time, and (4) decreasing group size (Vaughn et al., 2012).

From early on, in work on the development of the ISA, as noted earlier, we focused on the development of teacher knowledge related to early literacy development and instruction so as to enable teachers to provide responsive early literacy instruction across instructional contexts and curricula. We take the position that the nature and quality of instruction, along with the amount of time the child spends engaged in reading and writing continuous (meaningful) text are among the most important determinants of a child's response to instruction and intervention. Further, we argue that, to be optimally effective, the instruction offered across instructional settings and contexts (i.e., the different tiers of instruction/ intervention) should be responsive to children's needs and be coherent and mutually reinforcing. This position is based on both empirical and logical grounds. Empirically, it has been found, in at least a few studies, that a greater degree of curricular congruence across instructional settings is associated with stronger reading outcomes in the primary grades (Borman, Wong, Hedges, & D'Agostino, 2001; Wonder-McDowell, Reutzel, & Smith, 2011).[5] On logical grounds, if our goal is to enable children who qualify for intervention to benefit from and succeed in the classroom language arts program, it seems that alignment of instruction across classroom and intervention settings would be the most prudent approach—a position we took in all of the studies of the ISA. Of course, if the classroom language arts program is weak and/or inappropriate for the children who qualify for intervention, modifications to the classroom program would be an important (first) step in enhancing the quality of instruction that is offered.

Instructional Goals of the ISA

In this text, we present information on how to support children's development as they are learning to read and write. Early in literacy development, learning to read and spell words is a major hurdle, so we focus a good deal of the discussion on these critical aspects. However, as the preceding analysis emphasizes, reading and writing words is only a part of the process. Early literacy instruction needs to attend to the full complexity of the processes. Teachers need to provide instruction that helps children develop language skills and background knowledge that will enable them to do the kind of inferencing and reading between the lines that proficient readers do quite effortlessly. Teachers of beginning readers also need to ensure that children understand that the purpose of print is to communicate,

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[5]This is not an entirely consistent finding. For example, Foorman, Herrera, and Dombek (2018) did not find a clear advantage for coherence. The relationship between classroom instruction and instructional support provided beyond the classroom is clearly an area in need of additional research.

because only when readers understand that there is a message in the print will they engage in thinking beyond the initially challenging step of figuring out the words.

Considering the multiple factors that influence an individual's ability to comprehend written texts, the ISA is organized around a set of instructional goals. We encourage teachers to view instruction as a goal-oriented activity wherein they strive to help children achieve identified goals, using a variety of instructional formats and materials. The goals range from the relatively simple and straightforward (e.g., developing letter-name knowledge) to those that are quite complex and involved (e.g., helping children become strategic and active readers). Chapters 3 through 16 of this book are devoted to discussing each of the goals in detail. As we discuss each goal, we highlight the importance of being able to view literacy and literacy-related skills from the perspective of a young child who is a relative novice when it comes to understanding the intricacies of written language and how it relates to spoken language. Often, in our formal and informal observations of teachers working with young children and in our own work with young children who experience difficulty in learning about written language, we are struck by how difficult it is for highly literate people to take a step back and understand the complexity of reading and writing processes from the perspective of a child who is just beginning to experience print. We return to this perspective-taking theme frequently in discussing the ISA goals, because one of our major purposes in this book is to help teachers develop greater expertise in identifying and responding to difficulties experienced by literacy learners. Understanding the source of a child's confusion is an important step in responding effectively to that confusion.

In the instructional goals chapters, we review the relevant research for each goal and discuss how the goal relates to reading and writing processes more generally. We also discuss and provide sample instructional activities (often including sample instructional dialogues) that can be used to help children achieve the goal. Where relevant, we discuss more and less challenging aspects of particular activities—often presenting a sequence of objectives within given goals. We discuss assessment tools for many of the goals and the need to use observation and informal assessment to guide grouping decisions and instructional planning.

While for purposes of clarity, we address the goals in individual chapters, it is important to point out that, for the most part, the goals would *not* be addressed independently of one another. Indeed, in Chapter 2 we take up the topic of *responsive instruction* with the purpose of illustrating how goal-driven instruction can occur across the school day, with teachers adjusting their focus based on the current capabilities of the students they are teaching.

The first goal chapter focuses on "motivation to read and write" and closes out the first part of the book. In Part II, *Understanding Print and the English (Alphabetic) Writing System*, we describe instruction designed to help children learn about a variety of aspects of language and the relations between its spoken and written forms. The focus is on helping children learn about how printed language works—especially how the sounds in spoken language are represented in written language. In Part III, *Word Learning,* we discuss, more specifically, how

children learn to read individual words and how they become automatic in their ability to do so. In Part IV, *Meaning Construction,* we focus on the end goal of literacy instruction—the ability to understand texts that are read and, to a lesser extent, the ability to write meaningful texts. In the final section of the book (Part V) we discuss how the instructional goals might be addressed and integrated in the context of small-group lessons for children at different points in their literacy development (Chapter 17). In Chapter 18, we review some of the major principles discussed throughout the book and encourage teachers to strive to become reflective practitioners in relation to these goals and the early literacy instruction they provide. To this end, we remind teachers of several of the resources provided throughout the book that can support their understanding of and response to children's performance.

To an extent, the forgoing description of the organization of the goals addressed in this book could suggest that the content addressed in Part IV is the last or the least of our concerns. But nothing could be further from the truth. As discussed earlier in this chapter and depicted in Figure 1.2, in our view, comprehension (meaning making) and knowledge development are the reasons we learn to read and write and, of course, the reason we teach children to read and write. The purpose of Parts II and III of the book is to get students to the point where they can focus all or nearly all of their cognitive resources on the meaning-making purposes of reading and writing. That said, it is certainly not our intent to suggest that the goals be addressed in the sequence in which they are discussed. Rather, many of the goals can and should be addressed within a single school day—often within a single instructional context—as we illustrate in Chapter 2 (see pp. 46–49) and throughout the book.

Each of the goals is briefly described below.

Part I: Theoretical and Practical Understandings of Early Literacy Learning and Instruction

Motivation to Read and Write (Chapter 3)

Children will develop the belief that reading and writing are enjoyable and informative activities that are not beyond their capabilities.

In discussing this goal, we focus on a variety of factors that contribute to motivation, such as ensuring that children face an appropriate level of challenge in literacy activities, expressing enthusiasm for reading and writing, actively engaging children in thinking about and responding to texts, making read-alouds an important and interactive part of the day, and construing reading and writing as privileges rather than as jobs (e.g., "You *get* to finish your book before recess" rather than "You *have* to finish your book before recess"). An important part of supporting motivation is to convey that the aspects of the process that are initially a bit challenging will become less so with practice/experience.

Part II: Understanding Print and the English (Alphabetic) Writing System

> Children will understand the relationships between printed and spoken language and will learn these relationships well enough to be able to use them in reading and spelling previously unfamiliar written words. This is a process of connecting the letters in written words with the sounds in spoken words—a process referred to as *orthographic mapping*.

This overarching goal includes several subgoals related to the development of skill in using the alphabetic and orthographic code. Each of the goals addressed in Part II is identified and described briefly here.

Purposes, Concepts, and Conventions of Print (Chapter 4)

> Children will understand that the purpose of print is to communicate. Children will also understand the basic concepts and conventions of print, such as the concepts of letter and word, the left-to-right and top-to-bottom sequencing of print, where to begin reading, punctuation, and so forth.

Children who have had little exposure to written language are apt to be unaware that print is actually a form of language and that it is possible to translate print into spoken language and spoken language into print. In addressing this goal, we discuss the need to be explicit about the relationship between spoken and written language and the multiple ways in which print is used to communicate.

Understanding these foundational concepts is critical if children are going to make progress with literacy development. For children who do not yet have these concepts established, instruction needs to be explicit and should introduce one new concept at a time. Previously taught concepts should be revisited until they are well understood.

Phonemic Awareness (Chapter 5)

> Children will have a conceptual grasp of the fact that words are made up of somewhat separable sound segments. Further, they will be able to say individual sounds in words spoken by the teacher and blend separate sounds to form whole words.

In addressing this goal, we begin by working to attune teachers to the phonemes (sounds) in spoken language. Many highly literate adults are confused about how to segment words in which there are more letters than sounds (e.g., *mouse* has three sounds) or more sounds than letters (e.g., *box* has four sounds: /b/ /ŏ/ /k/ /s/). We discuss various approaches to developing phonemic awareness, with a particular emphasis on blending (listening to individual sounds/phonemes spoken by the teacher and combining them to produce a word) and segmenting (separating the sounds in a spoken word). We also discuss the features of phonemes that make them more and less challenging for children to attend to and/or manipulate. To help in determining whether and how to approach phonemic awareness instruction, we provide suggestions for ways to assess students' phonemic analysis skills.

Letter Naming (Chapter 6)

> Children will be able to name, rapidly and accurately, all 26 letters of the alphabet, both upper- and lower-case versions.

In discussing this goal, we begin to address fluency with foundational skills as an important contributor to reading comprehension. We stress that automaticity (speed) with letter naming/identification is important in order to free up cognitive resources for higher-level (more advanced) skills. To promote fluency with letter identification, we highlight the importance of having children say the letter names frequently during the course of the various instructional activities used to promote letter-name knowledge.

We also discuss the tendency of young children to rely on the names of the letters as an aid to remembering their sounds. For example, the sound for the letter *b* is the first phoneme in its name (/b/).[6] Thus, for many letters, if children know the name of the letter, it will be easier for them to learn the sound for the letter.

Letter–Sound Correspondence (and Grapheme–Phoneme Correspondence) (Chapter 7)

> Children will be able to associate the most common sounds of individual letters/graphemes with their printed representations. (*Note:* A grapheme is a letter or combination of letters that represent a single sound; *m, s, ch,* and *th* are all examples of graphemes.)

For this goal, we continue to focus on the relationship between letter names and letter sounds, how to take advantage of that relationship, and how to address the confusions that arise with letters for which the relationship does not hold (i.e., *h, w,* and *y*). We also discuss the introduction of common consonant digraphs (two letters that represent a single sound/phoneme (e.g., *ch*). Further, we discuss the utility of using key words to help children remember grapheme–phoneme correspondences, of using the same key words across instructional settings and grade levels, and of explicitly teaching children how to use the key words, when needed, to support reading and writing.

The Alphabetic Principle and the Alphabetic Code: Early Development (Chapter 8)

> Children will understand that the letters/graphemes in printed words represent the sounds/phonemes in spoken words, and they will also understand how to use the letters/graphemes in single syllable words to read and spell words.

In the chapter devoted to this goal, we describe instruction designed to help children acquire a conceptual understanding of the alphabetic principle; that is, the

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[6]To denote the sound of a letter/grapheme, we follow the convention of enclosing the grapheme in slashes.

fact that the letters in printed words represent the sounds in spoken words. At this early point in development, to make the concept as clear as possible, we limit the words used to those for which there is a one-to-one correspondence between individual graphemes and their associated sounds. For example, the word *hop* is characterized by one-to-one correspondence—one letter for each sound. In contrast, the word *hope* is not, as two letters are used to spell the vowel sound (*o–e*).

Rimes and Word Families (Chapter 9)

Children will develop the ability to use frequently occurring rimes (e.g., *ay, ell, old*) to read and spell words.

A *rime* comprises the vowel and what comes after it in a syllable. For example, *ap, ell, ike, og*, and *ut* are all rimes. Orthographic word families are built around rimes. For example, from the *ay* rime, the words *day, may, say, way, play, stay, tray,* and several others can be formed. Rimes are also part of words with more than one syllable (*today, hearsay, replay*), so knowledge of rimes has utility beyond the early stages of literacy development. One purpose of teaching common rimes is to help children learn to use them to effectively puzzle through printed words that contain those rimes and to support conventional spelling of those words as well. Teaching about rimes is also intended to attune children to the fact that there are recurrent orthographic patterns in the English writing system which, once learned, can enable them to more readily identify unfamiliar words and spell words they have not yet committed to memory.

The Alphabetic Principle and the Alphabetic Code: Later Development (Chapter 10)

Children will understand how to use all the letters/graphemes in printed words in determining the likely pronunciation of unfamiliar printed words. Similarly, children will learn to represent each of the sounds in a spoken word with a logical grapheme when writing.

In discussing this goal, we address ways to increase skill with decoding (reading) and encoding (spelling) by teaching children how to analyze consonant clusters (e.g., *cl, sn, st*) and how short- and long-vowel sounds are commonly (and variably) represented in print. Instruction around vowel teams (e.g., *aw, ea, or*) is also discussed. We stress the benefits of guiding children to be strategic as they apply their developing knowledge of the alphabetic code in authentic reading and writing situations, using both their knowledge of the alphabetic code and the context in which unfamiliar words are encountered. We also introduce the need to be flexible in determining the pronunciation of some of the graphemes in printed words—for example, the two different pronunciations of the *ow* vowel team (as in *snow* and *how*).

Morphological Units and Multisyllabic Words (Chapter 11)

> Children will understand that some words are composed of more than one unit of meaning (e.g., base words plus prefixes and/or suffixes) and will learn how to break longer words into meaningful units and/or syllables as an assist to understanding, reading, and spelling them.

It is important for children to attend to all the letters in written words when attempting to identify unfamiliar words as, over time, this will help them to store the words in memory so that they can identify them more readily on future encounters and spell them more accurately. Ultimately, however, children need to learn to process larger orthographic units rather than only puzzling through words in a letter-by-letter fashion, as this will help them develop fluency in word solving/word identification as well as spelling. Explicit instruction in how to make use of larger orthographic units can help learners make progress toward proficient word reading and spelling and can support their understanding of words with more than one morphological unit. In this same chapter, we also discuss ways to help children learn about clues to syllable boundaries and how to apply this knowledge when attempting to read unfamiliar words composed of more than one syllable.

Part III: Word Learning

> Children will learn to effortlessly identify a large number of written words.

This major goal is addressed via two subgoals, each of which focuses on a different vehicle for word learning. Although the term *sight vocabulary* is sometimes used to refer to high-frequency words or irregular words, we use the term to refer to all words that can be identified effortlessly "at sight."

Strategic Word Learning (Chapter 12)

> Children will develop flexibility and independence in using a combination of code-based (phonics) and meaning-based (context) strategies in interactive and confirmatory ways to identify and learn unfamiliar words encountered while reading. Learning to accurately identify words will also assist children in developing conventional spelling skills.

Strategic word learning is a central goal of the ISA. Having the ability to puzzle through and accurately identify unfamiliar words provides children with a powerful mechanism for expanding their sight vocabulary and, thereby, their ability to read (and spell). Because, in English (as opposed to several other alphabetic languages), there is a relatively large number of words that cannot be accurately identified using phonics knowledge alone, we emphasize the need for children to use both code-based (phonics) *and* meaning-based (context) strategies in interactive and confirmatory ways. We describe how, for children who are at a very early point in developing their phonics skills, contextual information (pictures and other

contextual information) will likely play a larger role in word solving, with phonics knowledge becoming the prominent means by which unfamiliar words are identified as phonics skills mature.

High-Frequency Words (Chapter 13)

> Children will be able to read and spell the most frequently occurring words accurately and quickly.

Although many of the words that become part of a child's sight vocabulary are learned during the course of strategic reading, some words warrant special instructional attention. These are words that occur frequently in print. Some are somewhat more difficult to learn due to their "irregular" spellings and/or abstract nature (e.g., *was, have, they*), while others have regular spellings but are often encountered in texts before children have the phonics knowledge needed to decode them (e.g., *like, she, for*). We encourage teachers to explicitly teach and provide practice with such words. We discuss game-like activities that motivate children to practice high-frequency words and texts that provide additional practice.

Part IV: Meaning Construction

> Children will develop the automaticity with word identification and facility with language skills needed to enable them to derive and construct meaning from texts that are read and to accurately express their intended meaning when writing.

Comprehension is the goal of reading. Because many children who experience difficulty learning to read in the early primary grades do so because of their difficulties with the alphabetic coding and word-reading aspects of reading, the importance of attending to meaning construction is sometimes overlooked—but it should not be. Instruction specifically focused on enhancing comprehension is addressed through discussion of three goals: oral reading fluency, language development, and comprehension and knowledge.

Fluency (Chapter 14)

> Children will be able to read grade-appropriate text accurately, with appropriate speed, and with phrasing and intonation that convey the intended meaning of the text.

We have included fluency under the overarching goal of meaning construction because, in order to construct meaning while reading, readers need to devote the majority of their cognitive resources (thinking) to meaning construction rather than to word solving. Fluent reading is also a signal that the reader is comprehending—at least at the sentence level—because, without comprehending the sentence being read, it would be difficult for the reader to apply the appropriate intonation.

Being able to read fluently does not, of course, guarantee comprehension of the larger text, but it increases the likelihood that the reader will comprehend.

Vocabulary and Oral Language Development (Chapter 15)

> Children will learn the meanings of new words encountered in instructional interactions and will be able to use the words conversationally. Further, children's ability to understand and use complex grammatical structures will improve.

Reading is a language skill. Children need to develop the vocabulary and other language skills essential for reading comprehension and communicative writing. We encourage teachers to be alert to vocabulary and syntactic challenges as well as variations in the structure of texts related to genre, throughout their instructional interactions. The opportunities for the development of language skills provided by interactive read-alouds are a major focus relative to this goal. However, we also encourage teachers to be attentive to the fact that children frequently encounter words for which they do not know the meaning and/or syntactic constructions in their own reading and that word-identification difficulties are sometimes caused by not knowing the meaning of printed words or understanding the context in which they are encountered. When this happens, the reader cannot decide (or confirm) whether a word has been accurately identified/decoded, and, therefore, meaning construction will be disrupted. Language skills also impact communicative writing. Here again, engaging in interactive read-alouds provides learners with the opportunity to encounter more sophisticated vocabulary and language structures that can later be reflected in their own writing.

Comprehension and General Knowledge (Chapter 16)

> Children will develop the foundational knowledge and comprehension skills and strategies that will enhance their ability to construct the meaning of, learn from, and ideally enjoy, texts heard, read, and/or written.

For children in the early primary grades, the development of active engagement in meaning construction is discussed in the context of read-alouds, shared reading, and supported reading (reading with teacher engagement). We encourage teachers to model comprehension strategies and to engage children in conversations that require the use of those strategies (e.g., "I think he's going to get a puppy for his birthday. What do you think he's going to get? Why?"). To help build the critical knowledge base upon which comprehension depends, we encourage teachers to read informational books to children as often as possible and to engage them in the thinking that such books invite ("Wow! Amazing to think about how a little critter that looks like a fish changes into a frog!"). As children begin to read texts on their own, we urge teachers to engage children in discussions of what they are reading to avoid allowing children to develop the belief that reading is about saying the

words right (and quickly) and not about meaning construction. Providing children with the opportunity to write about what they are reading and to create their own texts will help to make clear that reading and writing are primarily about meaning construction.

KEY POINTS OF THIS CHAPTER

✓ Reading and writing are complex processes that require skill with accurate word identification, language skills, background knowledge, and the intention/motivation to construct meaning.

✓ Children who experience difficulty with literacy learning are at risk of experiencing long-term difficulties. Therefore, efforts to intervene need to begin early.

✓ Most early literacy difficulties are related to phonological processing difficulties—the development of phonemic awareness and phonics skills.

✓ Broader language skills, especially knowledge of word meanings, measured in the primary grades, are related to reading comprehension throughout schooling.

✓ Instruction and intervention play a prominent role in children's literacy learning and in preventing long-term reading difficulties.

✓ The ISA is a comprehensive and responsive approach to literacy instruction that focuses on the role of teacher knowledge in enabling effective instruction.

- It revolves around instructional goals—instruction should be goal oriented rather than activity oriented.
- Instruction should be responsive to students' current points in development.
- It places heavy emphasis on the development of phonological skills and word-solving strategies.
- The ultimate goal of literacy instruction is to enable comprehension and knowledge development.