CHAPTER 2

The Alphabetic Principle and Phonics

I (Isabel) used to start a graduate course I taught, titled Psychological Theory and Research in Reading, with the following little survey: What do you think is the greater invention or discovery in the social history of humankind in each of the following pairs?: (1) the invention of the wheel or the discovery of relativity theory, (2) fire or the alphabet, (3) the method of expressing all numbers by means of 10 symbols or the Industrial Revolution, and sometimes a few other pairs. I read a question and two potential choices, and asked students to write their choices on a scrap of paper. The point of the little exercise was to prime discussion and, indeed, it did so, sometimes in a very animated fashion.

My use of the survey developed from some previous experience I had when I provided classes with a little background about language and literacy. I was usually disappointed with students' reactions to my statement "The alphabet is among the greatest inventions of humankind," which seemed to make little impression. Even after I explained it and students seemed to understand, reactions were still rather muted. That was disappointing, because many of us who study literacy stand in awe of the invention of the alphabet.

In the class discussion that followed the little survey, several members of the class suggested that one important criterion for deciding what makes something greater than something else is which one had had the greater influence on human development. That point prompted thinking about where the world would be without the alphabet and eventually became the major reason that the class unanimously chose development of the alphabet as the greatest invention.

Speaking, Writing, and the Alphabet

There is no way to know for sure, but humans are estimated to have developed speech at least 100,000 years ago. Spoken language, however, has a strong

biological component. "It is generally agreed that the ability to speak was the result of an evolutionary change in the brain. Certain areas of the human brain associated with speech are markedly larger than in the ape brain" (Raynor & Pollatsek, 1989, p. 36). Another argument for the biological influence on the development of language is that all human societies have developed oral language, but even today there are many societies that have not developed a writing system.

Writing and the Alphabet

The development of literacy starts with the development of writing, which was culturally, not biologically, driven. Writing artifacts from about 5,000 years ago were uncovered in Mesopotamia. Over time, writing moved from drawings to pictograms to logograms to syllabaries and eventually to representations of sounds in some words. Depending on the source, the crown jewel in written language—the alphabet—was developed about 2,500–3,000 years ago. Most sources point to the Phoenicians as the first to develop an alphabet, noting that the Phoenicians adapted Greek letters. The beauty of an alphabet is that it can represent in writing all spoken language. A remarkable characteristic is that from 21 to 30 letters can capture the individual sounds that comprise every spoken word in a given language's word reservoir. So if someone said, "The wheat is high," the precise words could be written. There would be no need to draw a hand raised high above a drawing of wheat, or above a standard symbol of wheat, or eventually a symbol combined with the first sound in the spoken *wheat*.

Implications of the Alphabet

The importance of the alphabet cannot be overstated. Speech is temporary; whatever anyone says goes away. The alphabet allows speech and thought to become permanent. Thus, a culture can pass on its views, discoveries, problems, reflections, and the like, to later cultures. Before the alphabet, the writing systems that had been developed were far too complicated and incomplete to represent all of spoken language, in particular, abstract thought. Thus, with an alphabet, cultures could pass on to the next generations what they knew. Without an alphabet, subsequent cultures could not benefit much from earlier knowledge.

The Phoneme Is Key

The feature of an alphabet that enables the faithful representation of spoken language in writing is the identification of the smallest sound within words—the "phoneme"—and the ability to represent those sounds with a manageable number of written symbols. As such, phonemes are the keystone to the alphabetic principle; that is, spoken words comprise individual sounds that are separable and can be represented in writing. The written representations of phonemes are called

"graphemes." In a perfect alphabet, there would be a one-to-one relationship between each phoneme and a grapheme. Spanish gets close to a perfect alphabet, but English does not. It is generally agreed that there are 44 phonemes in English, but there are only 26 graphemes to represent them. Thus, English is said to have a deep orthography, or writing system, because several graphemes can represent more than one phoneme: For instance, the letter *c* can represent /k/ or /s/. Additionally, combinations of letters (often two, sometimes more) can stand for one phoneme such as *oa* (*boat*), *ch* (*chat*), and *igh* (*light*). Finally, sometimes one letter can affect the sound of another letter, usually two positions away. The most common example is the silent *e* (often called "sneaky *e*" or "magic *e*" in instruction), which changes a vowel sound to long (*cope, make, ride*).

Although it is likely easier to learn to read with an alphabet in which every phoneme is associated with one grapheme, English "rules" are more consistent than some have asserted. If knowledge of several layers of English were input into a computer, the computer would be able to recognize 90% of input words (Moats, 2005).

Children need to understand the alphabetic principle, and the general understanding is not usually hard to grasp. But in order to apply the general understanding, the specifics of one's language need to be learned; that is, phonemes within words need to be learned so they can be associated with the written representation of these phonemes–graphemes. These specifics require time and are sometimes hard for some children to learn. We take up these issues next.

Phonics

Some years ago, I (Isabel) was in a line at the post office and overheard two mothers in conversation. I moved to full-fledged eavesdropping when I recognized that the conversation was about their 6-year-old boys and how they were learning to read in different schools. Early in the conversation, one of the mothers asked the other whether her child was learning phonics, and the other asked what she meant. Both of these young women were clearly intelligent and educated, so it may surprise those of you who are reading this book that some people don't know what phonics is.

As it turned out, the first mother's reply to the second mother was right on: "[Phonics] is about the relationship between letters and their sounds." The National Reading Panel (NRP) (2000) defined "phonics" as an instructional strategy that teaches letter–sound associations and their application through spelling and reading words. That, indeed, is what phonics is, and phonics is the instructional approach that supports learning how the alphabetic principle is applied in one's language. What can get hard and require time is teaching children the details of that principle (e.g., that the phoneme /r/ is represented by the written letter *r*, the phoneme /th/ is represented by the two letters *th*). So how does that knowledge get learned? As straightforward as the task of learning the letter–sound

correspondences may be for some children, other children have difficulty. Whatever the difficulty is, it needs to be identified and immediate intervention provided. Let's look at several children who had difficulty learning letter–sound correspondences.

Examples of What Can Go Awry

Theresa's Story

Lisa, a student in a master's-level university reading course, had been anxiously telling me (Isabel) about Theresa, a child in her second grade with strange word recognition problems: strange because she could read a lot of words that were harder than many she missed. Lisa was particularly concerned that, in the middle of Theresa's second-grade year, the percentage of words she read incorrectly seemed to be increasing. Lisa brought the results of Theresa's performance on some word recognition tests to class, and we tried to analyze her problems. Following are selected words from several word recognition lists that Lisa had administered to Theresa. The words in **bold** are those that Theresa did not read correctly.

an	*he*
and	*here*
are	*hot*
bat	***me***
be	*men*
boy	*off*
but	*on*
can	*tree*
cut	*with*
down	*work*
go	*yellow*

Another presentation of Theresa's misreadings helps to illustrate her difficulty more obviously. The words she read correctly are in the first column, and the words she read incorrectly are in the second column.

Words known	Words not known
and	*an*
bat	*but*
cut	*me*
he	*not*
hot	
mom	
no	

Notice that Theresa could read *and*, but she could not delete the *d* and read *an*. She was able to read *bat* and *cut*, but she apparently was not able to use the *b* and *t* in *bat* and the *u* (or the *ut*) in *cut* to read *but*. Theresa could read *mom* and *he* but couldn't use the appropriate phonemes from those words to read *me*. Finally, she was unable to read *not*, even though she was able to read *hot* and *no*.

Theresa is a quintessential example of a child who has a limited understanding of the alphabetic principle. That principle is that the sounds within spoken words are represented in writing by letters, and that those letters represent the sounds rather consistently.

Although Theresa's instructional experiences had included only superficial phonics, a question of interest is how a bright child (and Theresa was bright) could still not have figured out the alphabetic principle. Many of her classmates had, even though, like Theresa, they were not directly taught to do so. Why not Theresa? The answer is that some people just don't. Some interesting evidence associated with the "some folks just don't" notion comes from the work of Bishop (1964).

The Bishop Study

Bishop (1964) conducted a study with students from a prestigious university in which she simulated the beginning reading experience by teaching some students to read some Arabic words. Eight Arabic words used in the experiment included 12 letters for which there were perfect letter–sound correspondences.

Two groups were established. One group was taught a set of words, all of which included the 12 Arabic letters, through a whole-word approach (seeing and hearing a word until it was remembered). The other group was taught the phonemes that were associated with each of the 12 letters. The groups were then compared on their ability to read a set of transfer words (i.e., words that were not used in instruction but that contained the letter–sound correspondences that had been taught and used in instructional words).

The results of a transfer test showed that the letter-sound group performed best. Of more interest was that 12 of the 20 members of the whole-word group obtained scores similar to those of the letter-sound group. When asked how they read the words, they reported that they had tried to figure out the letter sounds within the words presented in instruction and thus had been able to extrapolate the letter–sound correspondences from the training words. As such, these adults used the alphabetic principle. This is far from surprising given that they were college students who read English well.

What is of greatest interest is that eight of the 20 adult participants in the word group did not attempt to use the alphabetic principle and instead attempted to memorize the words. We can only speculate why the eight college students did not call up the alphabetic principle. Perhaps they were not such good readers and in particular slow decoders; perhaps they were not good spellers—both possibilities could suggest that although knowledge of the alphabetic principle is available

to them, they are not facile with it. How could not-so-good readers be at a prestigious university? There *are* poor readers who are highly intelligent. We only know that intelligent college students did not use the alphabetic principle, even though the phonemes in this study could have been easily derived. So it should not be too surprising that some 7-year-olds will not figure out the alphabetic principle.

Back to Theresa

So what do we do about Theresa? Lisa believed that Theresa needed drill on the words that she did not read correctly. Lisa's suggestion of what to do about the child's problem reminded me of how much I would have agreed with her in the earlier days of my public school teaching career. In fact, flash card drill was exactly what I did with my first graders who were having difficulty. But both Lisa and I were wrong! Theresa's large sight vocabulary had masked her lack of phonics knowledge.

A misleading phenomenon for both Lisa and the earlier Isabel is that repeated word drills can produce a result. In fact, I (Isabel) would guess that if Lisa had done flash card drills on the words that Theresa had not read correctly in the preceding examples and on other words that Theresa didn't know, there would have been improvement on those words, that is, with her apparently good visual memory, Theresa probably would have learned some more sight words. But Theresa would have "hit the wall" sooner or later because of her astonishing lack of understanding of the alphabetic principle. Notice how much the following comment by Share and Stanovich (1995) captures Lisa's experience with Theresa.

> An analytic processing stance towards words . . . is probably not the "natural" processing set adopted by most children and some children have extreme difficulty in adopting an analytic processing set. The latter group will, as a result, have considerable difficulty building up knowledge of sub-word spelling–sound correspondences. (p. 53)

What Theresa clearly needed was phonics, which was perfectly defined by the first mother in the anecdote at the start of this chapter: "the relationship between letters and sounds." Lisa did provide Theresa with some phonics. She taught Theresa some letter–sound correspondences and how to blend those sounds. Actually, Lisa used procedures similar to the ones provided in this book, although not as complete for letter-sound and blending instruction. But Lisa's initiation of phonics with Theresa did not go easily at first. Theresa objected to the procedures. In fact, she actually asked Lisa to teach her the words she didn't know but not to do it with the sounds. Figuring out words through their sounds slowed Theresa down and was not satisfying. She just wanted to read the words.

But Lisa persisted with some motivational devices. Eventually, Theresa loved decoding words she hadn't been able to read, and her reading took off. My point

in telling the story is not to show what phonics can do but rather to indicate that if a teacher knows why she is doing something—in conversations with me and through readings that I provided in the course, Lisa came to understand Theresa's problems at a deep level—she can have confidence in what she is doing, in spite of some less-than-smooth lessons.

Rasheed's Story

As mentioned, Theresa's large sight vocabulary had masked her lack of phonics knowledge, and it took some digging to uncover her problem. The results of a pseudoword test given in March to Rasheed, a first grader who was not making progress in reading, follow.[1] The teacher knew Rasheed had decoding problems but didn't know the extent of it or what to do about it.

Pseudoword	Child's response
kot	ka
swip	s
gan	ga
dree	da . . . er
shub	ser
doy	ba
flate	fa
meep	mech
dut	da . . . u
pog	pa . . . u . . . ch
nack	na

The results suggest that Rasheed had some knowledge of the first sound in a syllable but was virtually unable to decode the vowel and final phoneme. The called-for remediation was teaching vowel sounds and how to blend all the sounds into a word. Rasheed's story had, at least, a short-term positive outcome; that is, through 3 months of special small-group instruction with emphasis on vowels and blending, his pseudoword results, as well as normal reading, improved. We do not know what happened later, but it seemed that he had made an important inroad; he applied the alphabetic principle from the beginning through the end of a word. Of course, that is not enough, and Rasheed will probably need extra support, but at least at the end of first grade, his reading was in the ballpark.

[1]Assessments using pseudowords (often called nonsense words) are useful tools to help teachers evaluate students' phonics knowledge. We provide a detailed set of pseudoword assessments (Specific Phonics Assessments) in Chapter 9 and Appendix 2.

Skye's Story

There is not a specific "Skye" that decoded words in the fashion we are about to show. "Skye" is a representative of some kindergarten and first-grade students that Mark has worked with over the years.

Skye was asked to read the following CVC words. In every case, she read the word, correctly or incorrectly, as a unit (*lap*, not /l/ /a/ /p/).

Word	Child's response
mud	mad
lip	lap
run	ran
hot	hot
cat	cat
bag	big
can	can
red	rod

Skye was accurate with initial and final consonants but had difficulty with medial vowel sounds. She may or may not have known the short vowel sounds in isolation, but when called upon to decode words, she did poorly. Additional work with vowel sounds within words would have probably been the right intervention.

In addition, Skye was too impulsive. For whatever reason, Skye was more interested in attempting to read the entire CVC word as a unit, and she believed that reading the word as a unit was a higher priority than accuracy. We have seen how impulsivity can interfere with accurate word recognition. Furthermore, impulsive readers, when they know they are being timed, may place such a high premium on speed that accuracy suffers even more. For such readers, Mark has created reinforcements for accuracy, such as a simple tally of correctly and incorrectly read words. And of course, the timer is nowhere to be seen.

Derek's Story

Theresa had almost no appreciation for the alphabetic principle, and Rasheed had some letter–sound, or grapheme–phoneme, correspondence knowledge, but he was able to apply it only to the initial grapheme in a word, generally a consonant. Derek's problem is a little different from Theresa's or Rasheed's. The results of an assessment, this time using real words, is particularly revealing:

Word	Child's response
cold	could
wear	war
figure	finger

certain	curtur
mineral	material
paragraph	photograph
describe	decided
century	country

Notice that the first two-word pairs on the test contain single-syllable words and that the remaining six word pairs have two- or three-syllable words. In either case, Derek is mostly accurate decoding the first and last grapheme but falls apart on the interior of words, whether the interior is one or two graphemes or the larger portion of a syllable. To handle the problem, Derek seems to have developed an interesting strategy. He seems to figure out the beginning and final phonemes, finds some letters in the interior of the target word, and transports those letters into a word he knows. It is interesting that he tends to keep the shape of the internal portion of the response word close to the target words. So the target word *figure* becomes *finger*, with *f*, *i*, and *g*, a match with the target letters in *figure*.

Derek knows a lot. He knows he has to represent the phonemes across a word, but the letters in the interior become a muddle. So he finds a word in memory that shares similar orthography, or spelling, with the target word and offers that word. What he doesn't know is how to put the sounds together. Word Building (Chapters 7 and 8), along with Syllasearch (Chapter 11) are perfect interventions for Derek. But we don't know Derek, so we don't know whether and what kind of intervention was offered.

Anisha's Story

Anisha's story is different from the preceding stories. Anisha did learn most of the letter–sound correspondences in kindergarten, albeit a little more slowly than most of her peers. On many occasions, Anisha had demonstrated that she was able to sound out CVC words and was quite accurate, although again slower. However, when Anisha was reading aloud, she got to some words and blurted out a word that had no orthographic resemblance to the printed word. It was not a matter of missing one letter or sound; the entire word she pronounced was nowhere in the ballpark. A sentence might be "The pets are in the pen," but she might read, "The pets are in the cage" or "The animals are in the cage."

Anisha and I (Mark) had an interesting conversation near the middle of kindergarten, which I remember as if it were yesterday. I asked her to read a decodable story with a lot of predictable CVC words. I noticed that she tended to be distracted by the pictures, so I covered up a picture and asked her to read the text. She replied, "I can't." I found that puzzling, because I knew that, at least in the past, she could. I asked her why not, and she said, "I can't read it because you covered up the pictures." I challenged her on that point, but she clung to her position that I had made it impossible for her to read the words when there were no pictures

for her to see. Of course, I wondered, if she can decode much of the time, why not today? I now know the answer: Sometimes Anisha didn't try to work out the pronunciation of words because decoding was so hard for her. Up until she made a substitution, I could see her lips moving in an attempt to figure out a pronunciation. It seemed that when she resorted to substitution, she was tired of the work she had been doing; she had kind of "had it" and changed to an easier way.

Anisha is fairly typical of a certain subgroup of early struggling readers. She actually has an appreciation of the alphabetic principle, and she knows many letter–sound correspondences. It is tenuous, but it is much better than the four children we discussed earlier. Unfortunately, other forces compete with the alphabetic principle. In Anisha's case, using the story context and pictures at times wins out over the alphabetic principle. Why? Because it is easier for her to "read" that way. Like most humans, she takes the easier path. It has been our experience that this type of "reading" is among the early signals that things are going awry. I have witnessed students as late as third grade blurt out words that have nothing to do with the spelling of the word in front of them. Such a tendency should be picked up early and intervention begun immediately. In Anisha's case, it was noticed in the middle of kindergarten.

The intervention that was most helpful for Anisha was one-on-one reading of decodable text, with redirection every time she pronounced words that were not on the page. Gradually, Anisha got the message that she had to do the hard work of connecting graphemes to phonemes, blending, and pronouncing the word that was on the page. Within a few months, Anisha's decoding took off. She had placed at the very bottom of her class in January on a pseudoword test. By the end of the school year in May, she improved dramatically on the same assessment, placing within the top half of her class. Most professionals would probably not consider her a struggling reader anymore. With lots of practice and insistence that she read the words that were on a page, Anisha didn't substitute words as often as she had. But interventions to help her become a more facile decoder were essential. Decoding had been given at least a fighting chance, whereas before, it had been a severe underdog. This is not to say, however, that Anisha did not continue to guess from time to time.

Kurt's Story

Consider examples of a first grader reading "A Lost Button," a story from the popular *Frog and Toad Are Friends* series (Lobel, 1970). In the story, Toad discovers that a button from his jacket is missing. Toad, a complainer, is upset, and Frog, a kind creature, looks for the button. Frog and other forest friends find many buttons. The buttons are brought to Toad, but each is not the lost button. Frog eventually finds the correct button, but Toad is annoyed that all the wrong buttons are cluttering his floor. Overnight, Frog sews all the discarded buttons on Toad's jacket, and when Toad sees his jacket, he is delighted. Following are four of the miscues Kurt made. Each word that Kurt substituted for is in *italics*, and the words he substituted are in parentheses.

> They walked across a large *meadow* (woods).
>
> The turtle and the lizards and the snake and the dragonflies and the field mouse all sat on the *riverbank* (lake).
>
> That button is thin. My button is *thick* (fat).
>
> Toad thought that it [the jacket with lots of buttons on it] was *beautiful* (fantastic).

In consideration of Kurt's substitutions, we developed some reasonable speculation about what Kurt may have perceived about each target word in resorting to substitutions and what clues enabled him to insert meaningful words. We offer the following notions.

In the case of substituting *woods* for *meadow*, there are two features of the word that could have been problematic: He could not decode *meadow* because the *ea* represented an infrequent phoneme for Kurt, and it would not be unlikely that the meaning of *meadow* was unknown to a second grader. As to the clues for the use of *woods*, many pictures suggested it could be woods. The two creatures are shown among very tall grasses, and relative to the size of Frog and Toad, they could be trees. Moreover, if Kurt had known that a *meadow* had flat topography with few if any trees, he couldn't have identified a *meadow* from the pictures, because the animals are shown in the midst of tall vegetation.

In substituting *lake* for *riverbank*, we first note that *riverbank* is a three-syllable word, likely difficult for Kurt to decode. Furthermore, the picture associated with the text shows more of an open area of water, like a lake, rather than water flowing in one direction, like a river. So the target word is a compound word with three syllables, the water in the picture does not look like a river, and this urban child likely has never been close to a riverbank and has not heard it in conversation. *Lake* is a perfect solution!

When Kurt read, "My button is fat," *fat* may have been a more natural opposite for *thin* in his mind than *thick*. Also, *thick* contains two consonant digraphs, which may have presented enough of a temporary hurdle to decoding that he chose to avoid it and instead used *fat*.

Finally, Kurt read that a jacket on which Frog has sewn a lot of buttons was *fantastic* rather than *beautiful*, the word on the page. Both are fairly long words, so judging just from length, *fantastic* was one of several appropriate choices. More substantively, Kurt may have been looking to describe that Toad wanted to show appreciation for what Frog had done. In that sense, *fantastic* may have been a more appropriate way to respond to what Frog had done.

One might ask how all those considerations could have happened in the short time it took to pronounce any of the substituted words. The answer is that reading happens as quickly as the blink of an eye. For example, the average response time of third graders reading words from a list is about 680 milliseconds (Perfetti,

Goldman, & Hogaboam, 1979, p. 275). A millisecond is one one-thousandth of a second.

We worried about Kurt, but two prominent academics, Frank Smith (1973, p. 190, cited in Stanovich, 2000, p. 6) and Ken Goodman (1976, p. 504, cited in Stanovich, 2000, p. 6), would not have worried about Kurt's substitutions. Indeed, they would have praised him because his substitutions made sense. We assert that Smith and Goodman would respond as we just suggested because they view reading as proceeding top-down; that is, a reader uses ideas about the meaning of a text to develop hypotheses about information on a page, and, as the reader goes along, he confirms or revises her hypotheses by sampling the graphic information (the words). In fact, Goodman (1967) called reading a psycholinguistic guessing game. Smith claimed that good readers "were particularly good at developing hypotheses about upcoming words, and were able to confirm the identity of a word by sampling only a few features in the visual array" (1971, p. 5). The position endorsed by Goodman and Smith holds that good readers rely more on context and less on graphic information than less skilled readers. As it turns out, many, many research studies show clearly that that is not the case. Let's look at some of those findings.

A Short Tale about a Long Scientific Effort

Early in their careers, cognitive psychologists Stanovich and West held a view of reading that was in agreement with Smith's and Goodman's top-down model. So in an early research project, Stanovich and West (1989) initiated a program of research to bring data to Smith and Goodman's theories, as they had never been tested. Stanovich and West's rigorous studies used reaction-time techniques to test their hypotheses.

A few words about how these reaction-time (often called "latency") techniques work. The general setup is that a word or a sentence appears on a screen. The time it takes between the appearance of a word and the instant a participant starts to say the word is called the response time. The resultant data is in milliseconds. Response-time techniques have been shown to be reliable and valid measures.

In the development of their studies, Stanovich (2000) describes how he and West adopted Smith and Goodman's own positions, as they expressed them, as hypotheses to the test:

- As the child develops reading skill and speed, he uses increasingly fewer graphic cues, that is, mostly words on a page (Goodman, 1976, p. 504).
- The more difficulty a reader has with reading, the more he relies on visual information (Smith, 1971, p. 221).
- One difference between good readers and the one heading for trouble lies in the overreliance on visual information that inefficient—or improperly taught—beginning readers tend to show at the expense of sense (Smith, 1973, p. 190).

These statements were the target of Stanovich and West's investigations. We use Stanovich's own words to tell you how their studies turned out, which we found fascinating. According to Stanovich (2000):

> These were the predictions [the three stated earlier] that Rich West and I went on to test with reaction-time techniques derived from cognitive psychology. To our surprise, all of our research results pointed in the opposite direction, it was the poorer readers, not the more skilled readers, who were more reliant on context to facilitate word recognitions. I say surprised because we embarked on these studies fully expecting to confirm Smith's (1971) views. The history of our work in this area is thus deeply ironic. We *did* [original emphasis] start out with a theoretical bias, one consistent with the top down view. But in real science one is eventually influenced by the evidence, regardless of one's initial bias, and the consistency of our findings led us away from the top down view. (p. 6)

In the same time period, Charles Perfetti from the University of Pittsburgh was finding the same thing (see, e.g., Perfetti et al., 1979; Perfetti & Hogaboam, 1975; Perfetti & Roth, 1981). We present the essence of what Perfetti and his colleagues and students found across at least a dozen rigorous word recognition studies. Keep in mind that the variable being measured is speed, so the shorter the latency, the better the participant's performance.

High-Skilled Readers Recognize Words Faster Than Low-Skilled Readers

Both low-skilled readers and high-skilled readers say words faster in supportive context in comparison with reading words in isolation. However, high-skilled readers are still faster than low-skilled readers.

Both low- and high-skilled students are negatively affected by *anomalous* context, but low-skilled readers are more negatively affected. For example, "Bill wrapped his laundry in a curtain." The essence, then, is that fast, context-free word recognition enables a reader to reserve much of her attention capacity to attend to the higher-order processes involved in comprehension.

In summary, let's answer a critical question: What do children need to know and be able to do to read words? They need the following:

- Understand the alphabetic principle: Words are comprised of separable sounds that are represented consistently by symbols.
- Know that the speech sounds are represented in writing by letters of the alphabet.
- Know which speech sounds correspond with which written letters.
- Know how to put those sounds together to form a pronounceable word.
- Have a strong sense of English orthography.
- Recognize words rapidly.

We deal with each of those components in the chapters that follow.

Mark's First Encounter with Learning to Read

I (Mark) clearly remember an incident that somewhat connects with Theresa's initial resistance to learning letter–sound correspondences. When I was about 4, I asked my mother to teach me to read. I remember sitting at our kitchen table and being very excited at the prospect of being able to read. After some preliminaries, Mom held out a letter card and told me that the letter *a* stands for the /a/ sound. She then told me to pronounce the /a/ sound. I diligently complied. We went through this routine several times. Then I told her, "Actually, I want to do the kind of reading that everyone else does with the words on the pages!"[2] Mom explained that I needed to do this first and that in 2 days I would be able to read some words. She continued with several other letters, and when 2 more days had passed, I did read several words. I was very excited. My mother had earned credibility, and I listened and became a good reader early on. Looking back, I could clearly identify with Theresa's impatience.

YOUR TURN

It may help set the backdrop for this book if you reflect a few moments about some of the students in your class.

- Make a list of several of your best readers and several of your weakest readers. Turn each of the six preceding statements into a question. For example: Does (student's name) know the sounds represented by the letters and letter combinations?
- For each question, rate each student as high, medium, or low for the six bulleted statements. Note that the six statements can be asked at first grade and higher grades, as the components are needed at all grade levels, albeit for increasingly complex words.
- Look at the results and determine the extent to which there are different profiles for the strong and weak readers. You may want to keep younger or weaker students in mind as the instructional strategies in this book are presented.

[2]The story is not unlike my practicing tennis with my then 6-year-old son. We went out to the court and struggled to keep the ball going over the net for more than one or two volleys. After several such attempts, he told me, "Dad, I want to do the type of tennis where the ball goes back and forth over the net a lot."