Preparing Young Children to Read

Marilyn Jasper Adams

Beginning to Read: A Summary
Learning about Sounds in Spoken Words

From research, we now know a great deal about the knowledge that children need to become skillful readers. This chapter draws from this body of research to examine how children develop that knowledge. In particular, the chapter looks at how young children become aware of spoken language. The discussion focuses on spoken words, syllables, phonemes, and onsets and rimes (which are units falling between syllables and phonemes).

Becoming Aware of Spoken Language

The problem in developing awareness of the different units in our language, or linguistic awareness, seems to be that the capacity of our active attention is limited. In speaking and listening, our attention is focused on the task of comprehending, the task of making sense out of the collective, ordered stream of words. To focus instead on each individual word, syllable, or phoneme is counterproductive. If we focused on the sounds in conversation, we would quickly lose track of the rest of the spoken stream and miss the message. For purposes of listening to language, therefore, it is fortunate that the processing of phonemes, syllables, and words is automatic.

For the purposes of reading or writing, however, children must pay attention to these units. They must push their attention down from the level of comprehension at which it normally works. Not surprisingly, the deeper into the system they must push, the harder it is for them to do. And so, awareness of clauses or propositions develops earlier and easier than awareness of words. Awareness of words develops earlier and easier than awareness of syllables. And awareness of syllables...
develops earlier and easier than awareness of phonemes. Awareness of phonemes, although the most closely tied to decoding skills, seems to come only after a child is aware of larger units.

**Becoming Aware of Spoken Words**

Words seem such obvious and accessible units of speech to adults. To us, they are fundamental units of meaning. We use them all the time in speaking to children, and they to us. Much of the linguistic growth of preschoolers consists of learning new words. And just a few years before, their speech began with single word utterances. Nevertheless there is evidence that words, as such, are not obvious and accessible units of speech for young children.

Surprising as it may seem, the evidence shows that children are inclined neither to conceive of spoken language as a string of individual words nor to treat words as individual units of meaning. What they listen for is the full meaning of an utterance, and that comes only after the meanings of the individual words have been combined — automatically and without their attention.  

Early reading instruction begins with the assumption that words are individual units of language. The concept of word and the ability to recognize otherwise familiar words when examined one at a time is presumed. Moreover, the word “word” is nearly unavoidable in instruction about reading. To make any sense whatsoever out of their classroom activities, children must already understand or quickly catch on to the idea of what a word is.

Fortunately, it should be fairly easy to induce children to attend to words. And, indeed, this is so. Even in a single setting, young children can make great progress in segmenting sentences into individual words (although they are extremely resistant to conceding that function words and prepositions are isolable words).

Of course, the number of children who learn about words through such experiments is extremely small. How do the rest of them do it? Many learn through exposure to print. In speaking, we do not produce words one by one. We do not pause between them, but produce our clauses in one single continuous breath of voicing. In print, there are spaces between the words. As children become aware of the oneness of words in print, they begin to notice and isolate words in speech. Apparently no great amount of reading sophistication is required for this insight. One researcher showed that word awareness increases dramatically along with
the earliest signs of emerging reading ability.

**Becoming Aware of Spoken Syllables**

Syllables are the smallest units of speech that can be produced in isolation. Further, unlike words, individual syllables are physically distinguishable in speech.

Not surprisingly then, syllabic awareness can be acquired relatively easily. First, even people with little or no reading ability generally can learn to direct their attention to syllables with reasonable ease and success. This has been found to be true for preschool children and for slow beginning readers.\(^8\)

Compared with words, however, syllables are still deeper in the system, still farther removed from meaning, and still closer to phonemes. This suggests that their conscious appreciation might be more difficult and more strongly related to reading acquisition than the conscious appreciation of words. Consistent with this suggestion, studies have shown that the ability to detect syllables in speech or to segment syllables from speech predicts future reading and is related to the reading progress of beginning readers.\(^9\) In addition, it differentiates older disabled readers from normally achieving readers.\(^9\)

The suggestion, in short, is that syllabic awareness constitutes an essential link between the seemingly easy-to-acquire ability underlying our sensitivity to sound similarity and rhyme\(^10\) and that hard-to-acquire capacity to recognize individual phonemes.\(^11\) In particular, the sensitivity to syllables in spoken words may be the beginning of reflection about spoken language that leads through phonemic awareness to learning of letter-sound correspondences.

**Becoming Aware of Phonemes**

To appreciate the alphabetic significance of letters, children must gain conscious access to phonemes. Yet the sounds of individual phonemes are not physically dissectable from the speech stream, but are thoroughly blended within the syllable.\(^12\) The nature and importance of phonemic awareness was reviewed in the previous chapter. This discussion, therefore, focuses on the question of how this awareness might develop.

The reading system is set up to give readers a “double or nothing” return on phonemic knowledge. To the extent that children have learned to “hear” phonemes as individual and separable speech sounds, the system will enhance their ability to remember, or “see,” individual letters and spelling patterns. To the extent that they have not learned to “hear” the pho-
nemes, the system cannot help their learning of individual letters and may even work against the efficient learning of spelling patterns.

It is from this perspective that we finally understand those earlier reported findings about the special magic of learning letters and their sounds together. On the one hand, we saw that teaching children to recognize letters produced little reading benefit unless the children were also taught the letters’ sounds. On the other hand, we saw that training phonemic awareness produced little reading benefit unless children were also taught the printed letters by which each phoneme was represented. Functional understanding of the alphabetic principle depends equally on knowledge of letters and on explicit awareness of phonemes because it depends so closely on the association between them.

Faced with an alphabetic script, children’s levels of phonemic awareness on entering school may be the single most powerful determinant of their success — or failure — in learning to read. As crucial as phonemic awareness is to the process of learning to read, however, conscious phonemic awareness is also very difficult to acquire. As we found out earlier, children have a highly developed knowledge of phonemes long before learning to read; if they didn’t, they could not produce or understand oral language. But, again, this is functional knowledge, not conscious knowledge. It is deeply embedded in the workings of the phonological processor.

Unlike awareness of words or syllables, the capacity to attend to phonemes is not easily attained. In particular, it seems to develop only through explicit training or through the learning of an alphabetic script. As an example, unless they can read an alphabetic language, phonemic awareness is rare even among Chinese scholars.

Although phonemic awareness can be explicitly taught, successful efforts to do so have involved many sessions of training. Further, among normal readers, the ability to count the phonemes in a syllable is only beginning to stabilize by the end of first grade. The ability to delete, transpose, or add phonemes to a syllable continues to develop at least through high school. Thus full attainment of phonemic awareness also takes considerable time.

In view of the extreme importance of phonemic awareness, the difficulty in instilling it is disturbing. Moreover, the difference in difficulty of establishing awareness of phonemes versus syllables seems far too great. We can hardly help but ask — isn’t there anything in between?
Individual learning of the magic of the one hand, was produced, also taught the at training benefit unless which each standing of the edge of letters it depends so

n's levels of the single moisture — in ness is to the phonemic we found outledge of phone. They could again, this is 2. It is deeply processor. the capacity to particular, it or through the e, unless they reness is rare explicitly taught, sessions of ability to count stabilize by the use, or add fast through awareness also phonemic aware-looking, the of phonemes readily help but

Becoming Aware of Onsets and Rimes
Acoustically speaking, the syllable is a spoken unit that cannot be analyzed. But psychologically speaking, it is obviously analyzable. That the syllable can be analyzed into phonemes is obvious because (and perhaps only because) we have learned the alphabetic script. Researchers also have long been aware that phonemes themselves are composites of still smaller units, corresponding to the place, manner, and voicing with which we produce them. To illustrate each:

Place: /b/, /p/, /m/, and /w/ are made with our lips while /t/, /d/, /s/, /z/, /l/, and /r/ are made by placement of the tongue on or near the ridge of gum behind our teeth.

Manner: "Stop" consonants, /p/, /b/, /t/, /l/, and /g/, are produced by momentarily but completely obstructing the flow of wind from our mouths at their places of articulation. "Fricatives," /f/, /v/, /θ/, /s/, /z/, /ʃ/, and /h/, are produced by forcing a controlled leak of air through their place of articulation. "Nasals," /n/, /m/, and /ŋ/, are produced by forcing the air out through the nose.

Voicing: Some of our consonant sounds are all wind, and others include vocal accompaniment. To see this, place your fingertips on your Adam's apple while you pronounce the following, otherwise matched, voiceless versus voiced pairs of phonemes:

/p/ - /b/  /t/ - /d/
/ʃ/ - /s/  /θ/ - /z/.

Now, the point is that most of us become aware of these features only in school or by reading something like this. Conscious awareness of them, after all, is not necessary for listening, speaking, reading, or writing.

They suggested that there are units between the phoneme and syllable, which they called the "onset" and the "rime." The onset is the part of the syllable that precedes the vowel; the rime is the rest. All syllables must have a rime. Not all need have an onset. To clarify, here are some words divided into onsets and rimes:
<table>
<thead>
<tr>
<th>Word</th>
<th>Onset</th>
<th>Rime</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>.....</td>
<td>I</td>
</tr>
<tr>
<td>it</td>
<td>.....</td>
<td>it</td>
</tr>
<tr>
<td>itch</td>
<td>.....</td>
<td>itch</td>
</tr>
<tr>
<td>sit</td>
<td>s-</td>
<td>-it</td>
</tr>
<tr>
<td>spit</td>
<td>sp-</td>
<td>-it</td>
</tr>
<tr>
<td>split</td>
<td>spl-</td>
<td>-it</td>
</tr>
<tr>
<td>splint</td>
<td>spl-</td>
<td>-int</td>
</tr>
<tr>
<td>pie</td>
<td>p-</td>
<td>-ie</td>
</tr>
</tbody>
</table>

Looking at syllables as being made up of onsets and rimes can explain several useful phenomena. For example, it is well known that beginning readers make significantly more errors on consonants at the end of words than at the beginning. If the letters mapped neatly onto phonemes, this would be hard to explain. After all, if children know that p says /p/ in *pat*, why would they fail to realize that it said /p/ in *tap*? Further, children have greater problems recognizing a consonant when it is blended (as in *smoo*) than when it is alone (as in *soom*).

In both cases, thinking about onsets and rimes as psychological units provides a useful explanation. In the first case, p is recognized more easily when it is alone in the onset than when it is encoded as part of the rime. In the second case, s is recognized easier when it is alone in the onset than when it is part of an onset (*sm*).

More evidence for the psychological reality of onsets and rimes comes from syllable splitting tasks in which children insist that the first sound in *swing* is *sw/, and from studies of children's decoding skills showing that children are better at identifying the spelling of whole rimes than of individual vowel sounds.

Putting It All Together
The basic units of representation in print are words and letters. Before children can acquire a productive understanding of the significance of these units, they must acquire an awareness of their spoken correspondences, words and phonemes. Yet it seems that awareness of neither is a natural by-product of oral language capabilities.

Though not natural, awareness of words seems to come quite easily. Several researchers have suggested that the key to the development of word awareness may lie in children’s exposure to print. More specifically, it may derive from the observation that written words are represented as discrete units, as wholes unto themselves and separate from each
In contrast, the development of phonemic awareness is very often both slow and difficult. Among those children who will learn to read successfully but who are not sensitive to phonemes before reading instruction is begun, phonemic awareness seems to develop alongside their word recognition skills. A lack of phonemic awareness, however, appears to be characteristic of children who are failing or have failed to learn to read.

Although phonemic awareness is not spontaneously acquired, it can be taught successfully. Furthermore, when reading instruction is methodically coupled with such training, the success rates are dramatic. Typically, such programs engage children in a variety of games and activities involving nursery rhymes, rhymed stories and rhyme production, segmentation of sentences into individual words, investigations of word length, clapping and dancing to syllabic rhythms and solving puzzles, and finally, isolation and identification, first of initial phonemes, and then of word-final and internal phonemes.

With respect to accelerating children's reading and writing achievement, the evidence from such training programs is compelling. Toward the goal of efficient and effective reading instruction, explicit training of phonemic awareness is invaluable.

To this high point, I must add a note of caution. A new trend is developing amidst many well-intentioned school communities. Kindergartners are being given tests of phonemic awareness, and, if they fail, are being held back from first grade. This trend is disturbing on two points. First, the key to phonemic awareness seems to lie more in training than in age or maturation. If these children have not received the proper exposure to print and sound in either their homes or their kindergarten classrooms by age five and a half, what is there to suggest that they will receive such exposure by the time they are six and a half? Second, short of its explicit training, the activities that seem to lend most strongly to the development of phonemic awareness are those involved in learning how to read and spell. Thus, in keeping children back to “wait” for phonemic awareness to develop, we hold them back from what may be, to that point in their lives, the best opportunity to allow it to develop.

Yet there would seem to be an easy escape from this dilemma. Specifically, why not suggest that all schools incorporate linguistic awareness games and activities into the standard kindergarten and preschool curricula?
The goal is not to transport the first-grade curriculum down to the kindergarten or the preschool. It is instead to encourage teachers to select and structure preschool and kindergarten games, songs, and storybook sessions with their students' linguistic growth in mind. It is to acknowledge that there is much that must be learned before a student can make sense of formal instruction.
Learning about Print in Written Words

We have seen again and again that skillful reading depends critically upon the speed and completeness with which words can be identified from their visual forms. Yet for the beginning reader, it is visual word recognition — the knowledge that makes the orthographic processor work and links it to the rest of the reading system — that is absent.

In the previous chapter, we saw that acquisition of this knowledge depends in part on children's conscious awareness of the phonological structure of speech. It depends equally on children's conscious awareness of the nature of print. No matter the level of a child's phonemic awareness, to make use of it, she or he must learn to identify the visual forms of individual letters. No matter the child's confidence with individual letters and their sounds, such knowledge can be productive only with the additional awareness that words consist of letters, and that text is made up of words. Moreover, not even word awareness is enough. Linking up the system as a whole, building both to it and from it, depends on the child's having certain expectations and understandings about the basic structure and functions of print. These first steps children take in learning about print are examined in this chapter.

The Development of Print Awareness

Children seem spontaneously to do things that amuse us and make us proud, such as knowing to greet their grandmother's friends with a polite handshake or that an occasion calls for an especially pretty dress. And they seem spontaneously to know things that drive us crazy, such as what kinds of packages are likely to contain candy — even kinds of candy they have never
Someplace in here, children must induce that print symbolizes language and that print holds information. They begin to see that stories in books, grocery lists, instructions for toys, flavors of ice cream, notes from teachers, all are messages found in print.

seen before. Of course, none of this is really spontaneous. Children are shrewd observers. They watch and make generalizations and distinctions with respect to just about everything in their world. And, for children who grow up in a print-rich environment, that includes print.

What are some of the things a child seems to learn about print?

*Print is categorically different from other kinds of visual patterns in the environment.* In some vague but characteristic way, print is visually distinct from the other sorts of pictures and patterns. On each occurrence, what it looks like, more than anything else, is other print. And though it contains no familiar, legible pictorial information — adults can, quite mysteriously, extract meaning from it.

However it works, *print is print across any of a variety of physical media.* It can appear on paper, fabric, television screens, or signs. It can be colorful or black and white. It can be accompanied by lots of pictures or none at all. It can be formed of ink or paint, plastic letters, electronic lights, or finger marks in the dirt.

Further, once you notice it, *print seems to be all over the place.* Not just in books and newspapers, but on storefronts, trucks, envelopes, cookies, coins, cans, and household appliances. It is inside your clothes and outside your shoes. It is even stamped on the backs of your dolls' necks and on the tops of your blocks.

*Different kinds of print are used by adults in different ways.* They read picture books aloud to you, but newspapers and books without pictures to themselves. They read signs, labels, and tags in stores and announce decisions when they're done. And there's lots of print that they seem to ignore (but they'll tell you what it says if you ask them to).

Finally, *print can be produced by anyone.* There are pencils, pens, crayons, and markers that you can make print with, though it is strongly preferred that you do it on paper. Adults are pleased when you write, although they can't always read it. There seems to be more to producing it than might appear.

Someplace in here, children must induce that print symbolizes language and that print holds information. They begin to see that stories in books, grocery lists, instructions for toys, flavors of ice cream, notes from teachers, all are messages found in print.

There are a number of case studies, chronologies, and descriptions of prereaders' growing understanding of the nature and uses of print.1 Such development does not occur in
a vacuum. It depends upon growing up in an environment where print is important. It depends upon interactions with print that are a source of social and intellectual pleasure for the individual children and the people who surround them. It thrives on pride and affection, and develops only through extensive experience.

As discussed earlier, many American children enjoy hundreds of hours of storybook reading and perhaps thousands of hours of overall literacy support during their preschool years. As we have also seen, however, many other children receive but a few minutes of storybook reading per year. Such children grow up without exposure to grownups who like to read, without papers and pencils and books to fool with. How much will these children learn about print in their preschool years?

Research indicates that many such children approach school with very little print knowledge. They don't know what a letter or word is, much less how to read one. They don't know that print reads left-to-right, much less that it contains words and sentences. They don't know the front from the back of a book, much less that its print is meant to convey meaning.

The importance of prereaders' awareness of print is becoming more and more recognized. Researchers have pointed out that awareness of the forms, functions, and uses of print provides not just the motivation but the backdrop against which reading and writing may best be learned. The performance of children on tests designed to measure concepts about print has been found to predict future reading achievement and to be strongly related to other, more traditional measures of reading readiness and achievement. More than that, analyses of other measures of reading achievement and readiness indicate that such basic knowledge about print generally appears to serve as the foundation upon which orthographic and phonological skills are built.

Becoming Aware of Words in Print

As discussed in the last chapter, conscious appreciation of individual spoken words seems not to arise spontaneously among children. Nor is it something that they are regularly taught in any explicit or methodical way. Still, most children must catch on at some point, or they would never master print. The ability to conceive of words as individually speakable, printable, and understandable units is critical not just to learning spelling-sound correspondences but, even before that, to gaining any initial insight into how written language works.

Indeed, it may well be through interest in print that
most children do catch on. Given the ease with which children can learn to segment words when they are required to do so, this explanation seems credible. Print corresponds to speech, word by word. For many children, this in itself may be all that is needed to provoke word awareness.

Yet here may be a source of concern. When children are left to catch on to an idea by their own devices, who knows what parts of it they will catch on to? Children think. And so, even for so simple a concept as “word,” their misunderstandings can be quite elaborate. For children who already have the insight that words are separable units of language, the function of that extra, blank space between them in print may well be self-evident. For children who have not had this insight, however, that extra space may not be enough to tip them off. Studies have confirmed what many teachers have observed—that some beginning readers do not understand the purpose of the spaces between words as they read.9

In the end, because the nature and function of words are not always obvious, training in word awareness seems another ideal candidate for the preschool or kindergarten curriculum. Once children have become attuned to words, it is important to show them that those strings of letters between the spaces are the same units that they can find in their speech. To ensure that children understand that this convention of extra-space-between-words is one that works in general, rather than, say, one that only works on the school chalkboard, it is important to point to the words in their storybooks while reading aloud to them.10

Exploration of word length is another worthwhile component of print awareness activities.11 Exploring and contrasting the lengths of printed words may, in fact, serve different purposes. First, it should help clarify the difference between syllables and words, and thereby hasten the insight that a printed word should be meaningful. Second, it should help speed awareness of those short function words whose status proves elusive to so many children.12 Third, it might nip in the bud the common first-grade notion that all words should be about three to five letters in length.13 Finally, it is a way of showing children that words that take longer to say also look longer in print; this correspondence between the printed and spoken length of words reflects a basic relationship between speech and (alphabetic) writing.14

Awareness of the relationship between the spoken and printed lengths of words is also a strong separator of reading-ready and reading-unready children. In one study, some kindergarten children were presented with pairs of words, one
long and one short, and told, for example, "One of these words is 'mow.' The other is 'motorcycle.'" Then they were asked, "Which one is 'mow'?" Of the reading-unready children, only 10% could choose correctly on seven of eight of the pairs, while 43% of the reading-ready children met this criterion.15

Many popular children's books are ready-made for developing word awareness. Dr. Seuss, for example, has been so insightful as to "design" the print in his books rather than just typeset it. In particular, it is often the very word that he has led children to anticipate that he has made graphically distinct. If children are given time to voice these words, his print is ready to answer — there's the word; it's large, colorful, and right in the middle of the page. In addition, Dr. Seuss has a wonderful flair for playing with word length — "Z is for zykker-zykker-zuzz,"16 that seems unfailingly to tickle his young audience.

Becoming Aware That Printed Words Consist of Letters
As has been noted, attention to the print that fills their environment can be the critical first step children take toward reading.17 In view of this, more precise understanding of what children learn from such "environmental print" is warranted.

Children commonly recognize a variety of environmental print that they encounter day to day. One study showed that children as young as two can "read" the McDonald's18 sign, toothpaste cartons, stop signs, and soft drink logos.19 Moreover, this ability to "read" labels and logos appears to emerge without apparent teaching.

On closer examination, such "untaught" reading of environmental print depends on a complex array of visual cues. Studies have found that as cues of design and color are removed, the labels and logos become more difficult to identify.20 Moreover, from several studies, it appears that children's "reading" of such labels and logos is typically quite independent of the print they contain, and that actually they perceive logos as pictures.

But suppose a child's attention is directed to the printed part of a logo. The child might then examine the pattern of print more carefully. Though a step removed from the kind of inductive, "emergent" learning we might hope for, it is plausible that, under these conditions, environmental print would support letter learning.

But it is barely plausible. After all, that which characterizes a good logo or label is its distinctiveness. The lettering used on one brand of soup is intended to be visually distinct from that used on any other. Just from the visual similarities
and differences of the print on labels and logos, how long would it take anyone to realize that, functionally speaking, there were just twenty-six letters? Note that, in contrast to the print children see in their environment, books—including preprimers and primers— are usually printed in a relatively uniform typeface.

When children do come to perceive printed words as sequences of individual and individually identified letters, environmental print may contribute much to word recognition growth. To do so, however, the children must first have begun to learn about the individual letters.20

Learning the Visual Identities of Letters
Research indicates that before entering school, most children have learned to identify and name most of the letters of the alphabet—or at least most of the upper case letters.21 Further, as discussed earlier, children's facility in identifying and naming letters has been shown repeatedly to be a powerful predictor of their reading achievement. First, it has been shown that learning about letters frequently turns easily into interest in their sounds and in the spellings of words.22 Second, familiarity with letters is strongly related to the ability to remember the forms of written words and with the tendency to treat print as an ordered sequence of letters rather than a holistic pattern.23 Finally, not being able to recognize or name letters is coupled with extreme difficulty in learning letter sounds24 and word recognition.25

It is easy to conclude that learning to recognize and discriminate between the letters of the alphabet is an important first step toward reading. What is it about the visual forms of letters that makes them hard to master?

The Difficulty of Learning to Recognize Letters
The letters of our alphabet are graphically sparse and confusable, looking as much like each other as anything else a child will have learned to date. They are abstract—how much easier it would be if an a in some way resembled an ant, a b a ball, and so on. In addition, the letters defy the child's learned indifference to orientation: A cup is a cup turned any which-way, but a, b, p, and q are distinctly different letters. They must be learned in such a way that they will be recognizable across a variety of hands and typefaces. And, in fact, there is not one set of twenty-six basic letters to be learned, but four, including both upper case and lower case in both manuscript and cursive. Learning the visual identities of letters is not a snap even for children who are interested in doing so. It takes time and
practice and requires careful visual attention.

Research indicates that the shapes of letters are not remembered as holistic patterns. Instead, the visual system analyzes each letter into its elementary features — its horizontal, vertical, and diagonal line segments and its arcs — and then represents the letter's overall shape in terms of the relative positions, orientations, lengths, and sizes of these elements. Thus we are indifferent to changes in the size or distortions in letters — what is important is the relative size, obliqueness, or extent of their parts.

Over time and with increasing familiarity with print, children become sensitive to the types of spatial relationships that distinguish one character from another. Given a set of novel, letterlike characters to inspect, children become progressively more attuned to gaps or openings between the features (as in the difference between C and O, F and P, and A and H) or to changes in rotation or orientation (as in the differences between b, d, p, and q). Meanwhile, children also become progressively indifferent to the kinds of visual differences that do not distinguish one character from another.

In the past, poor readers' errors with letter orientation were often interpreted as signs of neurological dysfunction or immaturity. Current research suggests instead that such errors reflect nothing more than insufficient knowledge of letter shapes. Letter reversals seem to be merely a symptom of low print knowledge, rather than a cause of reading problems. Moreover, training children to attend to the relevant contrasts between letters has been shown to hasten their ability to recognize and distinguish between them.

Teaching Children to Recognize Letters
Research indicates that the way in which children are most often introduced to letters at home is through the alphabet song and, further, that these children typically learn to recite the names of the letters long before they can recognize them. For teachers planning letter recognition instruction, there are a couple of useful points lurking in these observations.

First, letter learning for these children typically does not proceed by showing them the letters and then teaching them the names. That's backwards. Most children, instead, are taught the letters only after they know their names. By thoroughly learning the names first, children have a peg to which their perceptions can be attached. More than that, they have a set of conceptual anchors with which to sort out relevant and irrelevant differences in the letters' appearances. Second, it is significant that the initial ability to recite the alphabet is so
often achieved through the alphabet song. Songs, with their rhyme, rhythm, and tune, are far easier to learn than unintoned lists. Third, these children typically learn the names of letters long before being introduced to their sounds. When it is time to learn the sounds of the letters, their solid, overlearned familiarity with the letter names probably protects them from confusing the two.

For children who enter school with little knowledge about letters, potential confusions between their names and sounds are far more likely. And, although the sound of a letter is often similar to its name, there are important functional differences between the sound and name of a letter. In the interest of preventing any such confusion, a few programs avoid the use of letter names altogether, relying instead on the sounds of the letters for purposes of reference.

Although the motivation for this practice is well founded, it must be implemented with special care. Because learning about the sounds associated with the letters is itself a difficult task, the pace of learning the identities of letters must be relatively slow in such a program. To support adequate overall progress, the curriculum must be carefully designed to maximize reading and writing activities with the letters taught thus far. Without such care, it may be easier to make sure that children firmly recognize letters before formal instruction on spelling-sound relations or word recognition.

Upper case and lower case letters. With respect to teaching upper case and lower case letters, current learning theory holds only one suggestion: When working with children who have little or no letter recognition facility, teachers should not try to teach both versions of all twenty-six letters at the same time. To try simultaneously to teach two visually distinct forms with identical responses amidst fifty other often confusable forms with confusable sounds and labels will almost guarantee learning difficulties.

Eventually, of course, children must learn to recognize both upper case and lower case letters. At some point, each must be taught. Which should be taught first? With preschool children, the upper case letters are probably the best bet: Upper case letters are visually more discriminable from one another.\textsuperscript{31} In addition, whatever letter knowledge the children already have is most likely to be about upper case letters.\textsuperscript{32} On the other hand, the ability to recognize lower case letters is more important for reading text. Therefore, if working with first graders with little letter knowledge, it may be wiser to give priority to the lower case letters.

The question of how best to deal with confusable letter
forms becomes acute in teaching lower case letters. To minimize confusion between visually similar letters, such as b and d, research suggests it is best to separate their introduction so that the children are thoroughly familiar with the first before they are asked to learn the second. 

Research also suggests that it is a good idea to encourage children to print from the start. Learning to print is a powerful means of developing letter recognition skills. In addition, knowing how to print allows children to write words as soon as they are introduced — and, as we shall see, writing is a solidly productive activity for the young reader along many dimensions.

Finally, whenever letter-sound instruction is begun, research endorses the use of letter/keyword/picture displays, such as this one:

Such displays provide useful mnemonic support as they present an integrated reminder of the letter's shape and sound at once.

Ideally, children should become familiar with letters long before they get to school.

The Value of Pictures
Pictures are a prominent feature of most children's textbooks. Two major justifications are generally offered for their presence: (1) pictures may provide cues for identifying words that are otherwise hard to recognize; and (2) pictures may stimulate interest in reading a text and promote a better understanding of the information in the text.
Pictures as Aids for Word Recognition
It used to be that the practice of presenting an identifying picture along with each new sight word was very common in basal reading programs. Against this practice it has been suggested that the presence of identifying pictures might actually interfere with printed word learning. After all, if children can derive their response from pictures, mightn't that displace or at least detract from the attention they might otherwise pay to print?34

Several studies have since provided answers to this question. If the goal is to help children to identify an unfamiliar, isolated word, accompanying pictures are generally helpful. On the other hand, if the goal is to induce children to attend to and learn about details of the print, the pictures are better omitted.35

Pictures as Aids to Interest and Comprehension
Given the prevalence of illustrations in trade books and textbooks alike, the more important question is probably whether their presence helps or hurts children's tendency to learn about the words of connected text. The research on this issue is sparse, but — so far at least — the answer seems to be neither.36

Basal reading programs often suggest the use of pictures for purposes of promoting children's interest in and understanding of the text prior to reading.37 The teachers are to ask such questions as "What is going on in the picture?" and "What do you think will happen?" The children then are supposed to read the text and find out.

The underlying assumption is that children will transfer this questioning approach to their own, independent reading. Do they? In fact, from research we know that when reading silently, children take more time reading illustrated than unillustrated texts. They also pay more attention to the pictures when the text is relatively difficult for them.38

The suggestion, then, is that the children do attend to the pictures when left to their own devices. But do they do so in a way that is constructive? The evidence is sparse, but there is none to the contrary. In general, we know that information that is illustrated tends to be better remembered, particularly at the level of details. In addition, illustrations appear to be an effective means of inserting information that is consistent with but supplementary to the text (although incongruous illustrations can disrupt memory for text). And, importantly, the presence of supportive illustrations seems not to diminish comprehension for unillustrated sections of text.39

In short, the research provides no arguments against
the presence of text-compatible illustrations. Toward the goal of instilling the most positive attitudes toward text, however, there is a strong argument for their presence and for making books as enticing and attractive as possible.

For younger children, who are not yet reading themselves, intuitions suggest that pictures often provide an important and pleasing means of comprehension support. Extending our intuitions, research indicates that — in both quantity and quality — parent-child discussions of pictures are key to the appreciation of language and literature that grows from picture book reading.40

Promoting Awareness of Print
In preschool and kindergarten programs, enhancement of children’s concepts about print should be a central goal. The classroom itself should be full of print and the print should be varied, functional, and significant to children. In addition to displays of current activity themes and the children’s names and birthdays, cubbies and nooks should be labeled, sign-up lists posted, and so on. Visits to the school or public library are well worth the hassle. And research everywhere indicates that reading books with children is especially valuable.41

Sharing Big Books with Children
Books should be read in such a way that children can examine the pictures, discuss all aspects of meaning, and become aware of the format and function of print. To this end, the use of “big books,” or oversized versions of texts, offers many possibilities.42 Teachers can use these books to share print with a whole group of children as visibly and interactively as they might share a normal-sized book with just a few.

Big books are the classroom version of bedtime stories, and, like bedtime stories, they are meant to be read over and over, as often as they are enchanting. The repetitive patterns of these stories invite the prediction of events. Moreover the repetitive refrains invite prediction of and, so, engagement in the wording.

Repeated readings and repetitive texts set the stage for the acquisition of a broad sight vocabulary. Children can hunt down repeated words, and may acquire them as sight words. Acquisition of a few sight words early in the learning process is surely a good thing.

In reading a big book aloud to children, it is suggested that the teacher point to each word as it is read.43 This serves to
introduce the status of printed words, and to illustrate that text proceeds from top-to-bottom and left-to-right.

As children become more familiar with the nature of texts, word exploration can become more methodical. For example, reading situations can be used to lead children to discover the visual differences between one word and two words or between long words and short words.

Rhyming texts may be ideal for introducing the basic concept of spelling-sound correspondences. For more focused discussions of spelling patterns, a cardboard mask can be used. By exposing just one word or letter through the center of the mask, the teacher can direct children’s attention to that one word or letter. By progressively unmasking the letters of a word as they are read, the teacher can help children to understand that letters, too, proceed left-to-right.

Language Experience Activities
As important as books are, there is a more basic message to be conveyed about written text. Specifically, text is language.

The language experience approach was designed to convey this point in the most self-evident manner: Let students see that print is “talk written down.” The variety of classroom opportunities for capturing talk in writing is limited only by imagination. One method is the use of experience charts. Experience charts are developed by writing down children’s own oral language and then leading them to understand that what has been written is what they have said. Thus experience charts are intended to be a natural bridge between oral language and literacy.

For example, language experience activities can be used for preparing a class exercise or, afterwards, for discussing it. Before a unit on spiders, for example, the teacher can make a poster listing a comment about spiders from each child. After the unit, the teacher can make another poster eliciting new knowledge.

In managing such discussions, the teacher may be tempted to paraphrase a child’s contribution or to summarize the contributions of the group. To do so, however, runs awry of the spirit of the approach. Although the teacher may profitably take the opportunity, for example, to refine the syntax of a contribution, the words that are written should be the words that the children feel that they have produced. Not just the personal involvement of each learner, but more importantly, the very “Aha!” experience that the approach is intended to produce, depend on the children’s seeing that the print represents their own words.
As with big books, language experience activities provide a natural medium for clarifying the concept of word for pointing out that individual words are separated by spaces, and for pointing out that print is written from left to right and top to bottom and that the end of the line is not always the end of a thought.44

It has been argued additionally that, because comprehension is not a problem with self-produced materials and, moreover, because the message is familiar before it is read, language experience charts offer certain distinct opportunities for conveying information about the sound-symbol structure of print. Specifically, the children may be led to notice that words consist of sets of ordered letters that look roughly the same every time a word is written, that words are made up of letters, and that “each letter of the alphabet stands for one or more sounds I make when I talk.”44

Advocates of the language experience approach suggest that the texts under study be progressively expanded from transcripts of children’s own speech to texts written by others, including storybooks, signs, and so on.

Given its strengths and possibilities, it is not surprising that the language experience approach has sometimes been used as the central vehicle for reading instruction. Research, however, indicates that it produces achievement no better than traditional programs, and may be less effective in developing comprehension.45 On the other hand, the approach has been found especially effective for developing basic print awareness. For the purposes of conveying and refining the relation between print and language, what better means could there be than giving children written displays of their spoken thoughts?

**Putting It All Together**
The ability to read does not emerge spontaneously, but through regular and active engagement with print. For a child who is well prepared to learn to read, the beginning of formal reading instruction should not be an abrupt step, but a further step on a journey already well under way.

While preschool knowledge about written language is typically developed at home, schools can play an important role. Print awareness, letter familiarity, and phonemic awareness can all be developed through classroom instruction in the preschool, kindergarten, and first grade.