



Chapter 5

What We Know About How to Teach Phonics

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Phonics is once again a hot topic, and teachers, parents, school board members, and legislators are all talking about it. Everyone seems to agree that we need to teach phonics, and almost everyone has an opinion about how it should (and should not) be taught. The question regarding how to teach phonics is not a new issue, however. In 1934, Paul McKee, one of the most prominent reading experts of his day, wrote the following:

The question of instruction in phonics has aroused a lot of controversy. Some educators have held to the proposition that phonetic training is not only futile and wasteful but also harmful to the best interests of a reading program. Others believe that since the child must have some means of attacking strange words, instruction in phonics is imperative. There have been disputes also relative to the amount of phonics to be taught, the time when the teaching should take place, and the methods to be used. In fact, the writer knows of no problem around which more disputes have centered. (p. 191)

When McKee wrote these words, there was little knowledge on which to base decisions regarding how phonics should be taught. In the decades since, we have accumulated vast amounts of knowledge about how the brain works, how children learn, and how words are structured. In this chapter, we will first summarize some of the most important research findings about good teaching, regardless of what is being taught. Next, we will summarize the major findings specific to the teaching of phonics and how children learn to decode unfamiliar words. We will then suggest research-based activities for teaching phonics.

What We Know About How to Teach

There are some principles that apply to everything that is taught. As we consider how phonics should be taught, we must not overlook that all



instruction must help learners develop cognitive clarity and become engaged with what they are learning. All instruction also must be as multifaceted and multilevel as possible.

Children Need Cognitive Clarity About What They Are Learning

Cognitive clarity is knowing what you are trying to do and understanding where you are trying to go and why you are going there. When you have cognitive clarity about a task, you are more likely to persist in your efforts because you anticipate the goals you will eventually reach. You self-monitor your actions by thinking about whether they will get you where you want to go. You are able to cooperate with the instruction you receive because you know what your teacher is trying to help you learn.

Imagine that you are making a new recipe—Tangy Thai Trout. You are a good cook, but Tangy Thai Trout requires ingredients and procedures that you have never used before. What would be your level of cognitive clarity? That would probably depend on your prior experience and level of support. If you had never eaten or seen anyone prepare Thai food, your cognitive clarity would probably be fairly low. What if you had never seen anyone cooking it, but you had eaten it in a wonderful Thai restaurant and then gotten the recipe from a friend of the chef? Anticipating how good it could taste and having an idea of the finished product would definitely increase your level of cognitive clarity. Now imagine that you are watching a television show on cooking and, serendipitously, there is a chef preparing Tangy Thai Trout. If you quickly put a tape in your VCR and capture the step-by-step demonstration, you will probably create a dish your friends and relatives will rave about.

Cognitive clarity is often taken for granted by adults, who have a clear sense of the importance of what they are trying to teach. Unfortunately, many children—particularly those who come from less academic environments—have little idea what they are trying to do or why anyone would want to do it. Experiencing the end product and watching people successfully modeling the processes necessary to achieve that end product gradually develop learners' cognitive clarity.

John Downing coined the terms *cognitive clarity* and *cognitive confusion* in his theoretical work on reading, but the terms have broad application to all learning. Downing (1979) defined cognitive clarity as “a technical label for the psychological components that lie behind what the



layman might refer to as ‘clear understanding,’ ‘clear thinking,’ [or] ‘grasping the problem’” (p. 5). As such, cognitive clarity would be considered a component of metacognition, and it would be supported by the research that has found that clear understanding of a task and its goals aids learning.

Children Need to Become Engaged With What They Are Learning

Engagement is probably the most common term used to talk about the relationship between motivation and learning. Engaged learners work in a motivated way—that is, they employ whatever skills and strategies they have with effort, persistence, and an expectation of success. Recent theory and research have changed the predominant view of motivation from being a drive or the result of reinforcement to being learners’ beliefs about themselves (Guthrie & Wigfield, 1997). We now know that motivation has at least three major components—self-confidence, beliefs about why you succeed or fail, and seeing the activity to be learned as pleasurable.

One of the most important aspects of motivation is self-confidence (also called self-efficacy). According to Schunk and Zimmerman (1997), “Self-efficacy refers to beliefs a person has about his or her capabilities to learn or perform behaviors at designated levels” (p. 34). The research on self-confidence and learning suggests that students who have doubts about their ability to learn something are less likely to try to learn it and more likely—when they do try to learn it—to give up when they encounter difficulty. Students who have confidence in their ability to learn something put forth more effort to learn it and tend to persist even in the face of challenges.

The feeling of being capable of learning is not a constant attitude. All of us have self-confidence about learning in some areas while lacking it in others. For example, a person may have high self-confidence when learning to play a new musical instrument, but lack confidence that he or she can learn to play a new sport. Persons with self-confidence in math do not always have self-confidence in literacy. Learners must be helped to develop or maintain self-confidence in each subject being taught.

In addition to self-confidence, motivation is affected by learners’ beliefs about why they have difficulty. If they believe that they are having trouble because they are not good at learning, their difficulty will



undermine their self-confidence. However, “[n]egative self-evaluations will not diminish self-efficacy and motivation if students believe they are capable of succeeding but that their present approach is ineffective” (Schunk & Zimmerman, 1997, p. 40). Students must learn to self-monitor their success and learn that it is not their ability but the approach they are taking that is the cause of their success or failure.

Young children especially are dependent on their teachers and fellow students to help them acquire the insight that our strategies are different from ourselves. Only by watching teachers and peers actively applying strategies, self-monitoring success, and—if necessary—changing strategies do young children learn that success does not result from some fixed ability, but from knowledgeable and flexible efforts. Unless students learn to attribute their success or failure to their procedures rather than their unchanging competence, they will not be willing to learn different procedures or to give those procedures a chance to work.

As important as self-confidence is in learning, there are nevertheless things we have confidence we can learn that we still have no desire to learn. Children who dislike something may avoid it or give only partial attention to learning it, although they have the self-confidence to learn it. At first, we expect to have to insist that students pay attention to our lessons and attempt assigned tasks. Before long, however, if students still only pay attention during lessons or complete tasks when we insist or reward them for doing so, we know their chances of ever being good at that activity are low. Ultimately, being successful at learning anything requires that we become interested in the activity to be learned and see doing it as enjoyable.

Engagement plays an important role in learning any subject. Learners who develop self-confidence, try new strategies when they experience failure or difficulty, and come to see the activity as pleasurable are motivated learners.

Children Need Instruction That Is Multifaceted and Multilevel

Fostering cognitive clarity and promoting engagement are universal teaching principles that apply to all subjects and learners of all ages and types. A third general instructional principle acknowledges the differences in how children learn. Gardner (1993) introduced the idea of multiple intelligences and reminded us that children do not all learn in the same way. They come with their own personalities, learning strengths,



and learning weaknesses. Regardless of what you call them—multiple intelligences, learning styles, personalities—or exactly how many types exist, children have them. The best instruction in any subject seeks multiple ways to accomplish the same goals so that regardless of how a child prefers to learn or learns best, an opportunity to learn in that way is available.

In addition to having different learning personalities, children vary with regard to their entry level and how many encounters it takes them to “own” a skill or concept. Instruction that takes a single skill or concept and teaches it to mastery before going on to the next concept is only effective if it is being given to one child at a time. As soon as you have two or more children, you will have different entering knowledge levels and different numbers of encounters needed for learning.

A multilevel activity is a single activity that is so rich, students at different levels may learn through the same activity. Unlike single-level activities, multilevel activities are not frustrating for those with much to learn, boring for those with little to learn, or both when aimed at those in the middle. When teachers provide daily multilevel learning opportunities, more children achieve the mastery desired over time (Cunningham, Hall, & Defee, 1998).

What We Know About How to Teach Phonics

Keeping in mind the overall learning principles explored in the previous section, we will now look specifically at how to teach phonics. There have been few instructional studies comparing different types of phonics instruction, and those that have been done have often compared systematic phonics instruction with “hit-or-miss” phonics instruction. From these studies, we can conclude that any kind of well-organized and efficient phonics instruction is generally better than little or no phonics instruction that leaves learning phonics to chance. Stahl, Duffy-Hester, and Stahl (1998) reviewed the research on phonics instruction and concluded that there are several types of good phonics instruction and that there is no research base to support the superiority of any one particular type. The National Reading Panel (2000a, 2000b) reviewed the experimental research on teaching phonics and determined that explicit and systematic phonics is superior to nonsystematic or no phonics, but that there is no significant difference in effectiveness among the kinds of systematic phonics instruction. The Panel also found no significant



difference in effectiveness among tutoring, small-group instruction, or whole-class phonics instruction.

In trying to determine what type of phonics instruction is most effective, we must look at other research findings about how children learn phonics. We can then combine these findings with the three overall learning principles and make some reasonable and research-based suggestions for how best to teach phonics.

Children Need Phonemic Awareness But That's Not All They Need

One of the understandings that many children gain from early reading and writing encounters is the realization that spoken words are made up of sounds. These sounds (phonemes) are not separate and distinct; in fact, their existence is quite abstract. Phonemic awareness has many levels, and it includes the ability to decide whether spoken words rhyme, to know what spoken word you would have if you removed a sound, and to manipulate phonemes to form different spoken words. Phonemic awareness seems to be developed gradually for most children through much exposure to nursery rhymes and books that promote word play such as *Green Eggs and Ham* by Dr. Seuss, *Inside, Outside, Upside Down* by Stan and Jan Berenstain, *There's a Wocket in My Pocket* by Dr. Seuss, and *The Berenstains' B Book* by Stan and Jan Berenstain.

Phonemic awareness is one of the best predictors of success in learning to read (Bryant, Bradley, Maclean, & Crossland, 1989; International Reading Association, 1998). However, this has led some people to conclude that phonemic awareness is all we need to worry about in preparing children to read. Phonemic awareness training programs have been developed and mandated for every child, every day for 30 to 40 minutes. The classroom reality is that there are only so many minutes in a day, and if one activity gets 30 to 40 minutes, other important activities get less time. In addition to phonemic awareness, children who are going to learn to read successfully must develop print-tracking skills and begin to learn some letter names and sounds. They need to develop cognitive clarity about what reading and writing are for, which they can only learn when they spend some of their time each day in the presence of reading and writing.

Another problem with this overreaction to the phonemic awareness findings is that some children enter school with sufficient phonemic awareness to begin to learn to read, whereas others will develop it solely



from engaging in emergent literacy activities such as shared reading of books that play with sounds, writing with invented spelling, and learning onsets using a variety of activities (key actions, students' names, and key foods or beverages). What are these children going to gain from 30 to 40 minutes of daily phonemic awareness training (90 to 120 hours in a school year)? Such single-level instruction can only bore and even confuse those who already have or would learn phonemic awareness without it.

Children Need to Learn Sequential Decoding But Not Necessarily Through Synthetic Phonics Instruction

Sequential decoding is the ability to look at all the letters in an unknown word and associate sounds with some of the letters. Sequential decoding is not necessarily accomplished by saying a sound for each letter and then blending those individual sounds together. Beginning readers often use what is called the “consonant plane” (Berent & Perfetti, 1995) to sequentially decode words in context. Imagine a young reader who knows as sight words *he*, *went*, *to*, and *and* looking at a picture of a boy fast asleep in bed with this sentence underneath: *He went to bed and fell fast asleep*. By looking at all the letters in the unknown words *bed*, *fell*, *fast*, and *asleep*, a beginning reader who knows the consonant sounds, is using the context and picture clues, and knows that reading has to make sense and sound like language could use the consonant plane to decode the unknown words in that sentence.

Synthetic phonics approaches begin by teaching children individual sounds for letters and then having them blend those letters together to sound out words. In synthetic phonics programs, the first text children read is constructed to have them practice their decoding and is restricted to sounds they can blend to make words, plus a few essential sight words. Here are the first two pages of an early story in a synthetic phonics text (Cassidy, Roettger, & Wixson, 1987, pp. 15–16):

Dad ran. Ann ran. Dad and Ann ran.

Dad ran. Nan ran. Dad and Nan ran.

To become fluent readers, children must learn the common sounds for vowel patterns. But, in the beginning, readers can learn to do sequential decoding using meaning and the consonant plane. As they decode more words in this way, children learn more about words and



particularly about patterns in words. Children must learn to sequentially decode words, but that does not mean they need to be taught with a synthetic phonics approach.

Children Need to Apply Phonics But Do Not Need to Be Restricted to Highly Decodable Text

The two sentences in the previous section about Dad, Ann, and Nan are an example of highly decodable text. Based on the finding that children need to have opportunities to apply their phonics to decode words (Juel & Roper/Schneider, 1985), some researchers have advocated the exclusive use of highly decodable texts for beginning reading. In her summary of National Institute of Child Health and Human Development (NICHD) research, Grossen (1997) suggests that decodable text be required for beginning reading instruction. Many reading educators and psychologists have since questioned this summary (e.g., Allington & Woodside-Jiron, 1997; Hiebert, 1999). Although there is general agreement that children need text in which they have to apply their decoding to some words, there does not seem to be any support in the research for recommending highly decodable text as the exclusive beginning reading material for all children.

Hiebert (1999) makes the case for children reading text that provides practice with high-frequency words, along with opportunities to apply decoding skills and use meaning-based cues. Because she does not see these “multiple criterion” texts presently available, she suggests teachers may want to provide different kinds of texts—some more sight-word oriented, some more decoding oriented, and some more meaning-cue oriented—to children on a regular basis so that they learn to use all the word identification cues fluent readers actually use.

As Children Learn More Words, They Use Patterns and Analogy to Decode

Imagine that you are reading and encounter the words *spew* and *spate* for the first time. You would probably quickly pronounce them in your mind and then try to make sense of them in their sentence context: *A spate of people gathered when the oil began to spew out of the ground.* Good readers encounter new words in their reading all the time. If you have never seen a word before, you have to decode it—get it pronounced—in some way, whether overtly or covertly. Some researchers (Adams, 1990; Goswami, 2000; Goswami & Bryant, 1990; Moustafa, 1997) believe



that the way you decode many, if not most, words is to use patterns learned from other words. *Spew* has two patterns—*sp* and *ew*—often called the onset and the rime. *Spate* has the same onset—*sp*—but a different rime—*ate*.

Because you are a fluent reader, when you first encountered *spew* and *spate*, you probably automatically decoded these words using the patterns—*sp*, *ew*, *ate*—familiar to you from words such as *spill*, *spy*, *new*, *few*, *chew*, *ate*, *gate*, *date*, *hate*. If you had encountered these words earlier in your reading development when you did not have the *sp*, *ew*, *ate* patterns firmly established from many other words, you might have had to go through a slightly longer process in which you thought of some *sp*, *ew*, and *ate* words you knew, used these words to find the pattern, and applied these patterns to the new words. Your brain may have thought something like, “*S-p* is how words like *spill* and *spy* begin. *E-w* is in *new* and *chew*. *A-t-e* is in *ate* and *date*.” You use analogy to decode when your brain accesses other words you know and combines these patterns to decode new words.

Decoding by pattern and analogy uses the same units—the onset and the rime. It is difficult, if not impossible, to know which one a reader is using. In general, the more words you have read with a particular pattern, the more apt you are to have that pattern stored in your brain and thus the less likely you will go through an analogy process. When you are just beginning to learn to read, you do not have enough words to use analogies or to induce patterns. Most researchers believe that by the time children have a fluent first-grade reading level, they are using patterns and analogy as their major decoding strategy.

Gaining knowledge of rime patterns may be particularly important for learning to decode the “vowel plane” of words because of the difficulty of vowels and how vowel sounds are affected by other letters in the word, particularly the consonants that follow them (Berent & Perfetti, 1995; Goswami, 2000).

Children Decode Multisyllabic Words Using Patterns That Are Often Morphemes

What do you do when you come to large words in your reading that you have never encountered before? Imagine the first time you meet the printed words *technostress* and *desertification*. Just as with smaller words, you decode or pronounce them. You probably pronounce *technostress* quite quickly and even figure out a meaning: “I know how that feels!”



Desertification probably takes a little longer and may require a sentence context to solidify the meaning: *The desertification in Africa caused by the removal of trees and brush should be of concern to the entire world community.* Using what you know about the root word *desert* and other words that end in *ification*, such as *modification* and *unification*, along with the sentence context, you confirm your pronunciation and construct meaning for *desertification*.

Decoding large words is also accomplished by patterns and analogy. Rather than onsets and rimes, however, the patterns are often morphemes—root words, suffixes, and prefixes. English is the most morphologically connected language. Estimates are that for every word you know, you can quickly learn six or seven other words that share some of the same morphemes (Nagy & Anderson, 1984). Because morphemes provide meaning clues as well as decoding and spelling patterns, learning how to use the morphemes in large words helps you build your meaning vocabulary. Wide reading is the most significant predictor of vocabulary size, and the best guess of experts is that you use context and morphological clues together to infer meanings for new words you encounter in your reading.

Research-Based Phonics Instruction

We now come to the question that drives this chapter. How should we teach phonics, given all that we know about how children learn and particularly how children learn to decode? In this section, we will first show how research supports the value of reading, writing, and multiple activities for the teaching of phonics. We will then describe three phonics instructional activities that are consistent with the research summarized in the first two sections of this chapter.

Children Should Spend Most of Their Reading/Language Arts Time Reading and Writing

Although it is difficult to fix a specific number, the ratio of real reading and writing time to phonics instructional time we have settled on is 3 to 1. Over the past 12 years, we have developed an effective instructional framework for primary literacy instruction called The Four Blocks (Cunningham, Hall, & Defee, 1998; Cunningham, Hall, & Sigmon, 1999). Children in Four Blocks classrooms spend 30 to 40 minutes each day engaged in guided reading, 30 to 40 minutes in self-selected reading (which includes teacher read-aloud), 30 to 40 minutes in writing, and 30



to 40 minutes working with words. Three blocks, or three quarters of the language arts time each day, are allotted to real reading and writing.

It is beyond the scope of this chapter to describe in detail all the activities that occur during the guided reading, self-selected reading, and writing blocks, but these three instructional methods are critical to implementing the general learning principles discussed earlier. Because these three methods largely consist of “real” literacy activities, they help develop cognitive clarity about what reading and writing are and how they are used. As children find pleasure and success in reading and writing, their level of literacy engagement increases. There is much variety within each of these three methods, making the literacy experience a multifaceted one. Self-selected reading and writing are always on each child’s reading level and thus assure that a good part of each day’s instruction is multilevel. In addition, these three methods support the teaching of phonics that takes place in the working-with-words block.

Guided reading instructional time provides students with guided practice in applying the phonics skills they are taught during the working-with-words sessions. Self-selected reading and writing instructional times each provide students with both guided and independent practice in applying those phonics skills. During writing instructional time, writing with invented spelling also fosters phonemic awareness and sequential decoding.

Clarke (1988) compared the effectiveness of invented spelling versus an emphasis on correct spelling in first-grade classrooms. The children who had regularly invented spellings were superior to the others on measures of word decoding at the end of the year. Furthermore, invented spelling was particularly helpful to learning phonics for those first graders who had been designated as having low readiness at the beginning of the year.

Phonics Should Be Taught Through a Variety of Multilevel Activities That Emphasize Transfer

We now turn our attention to the time designated to helping children learn phonics. From our experiences helping teachers implement *The Four Blocks*, we have learned that a variety of phonics instructional activities that emphasize transfer help children at all levels learn phonics without boredom.

There are a number of activities we use to help children develop their phonics skills. Following, we will briefly describe three of these activities and then explain how they reflect our learning and phonics principles.



Making Words. Making Words (Cunningham & Cunningham, 1992; Cunningham & Hall, 1994) is a manipulative activity in which children learn how to look for patterns in words and how changing just one letter or where a letter is placed changes the whole word. Each Making Words lesson has three parts. First, children manipulate letters to make 10 to 15 words—including a “secret” word made from all the letters. Next, they sort the words into patterns. Finally, they learn how to transfer their phonics knowledge by using rhyming words they have made to decode and spell some other rhyming words.

To plan a Making Words lesson, we begin with the secret word. Here is an example for a Making Words lesson in which the secret word is *Martin*. This word was chosen to fit a theme—famous African Americans—and it allows us to make words we can then sort for the *t-r* blend and lots of rhymes. Using the letters in *Martin*, we choose 10 to 15 words that will give us some easy and harder words, some *t-r* words, and several sets of rhymes. We then decide on the order in which words will be made, beginning with short words and building to larger words. We write these words on index cards to use in the sorting and transferring parts of the lesson.

As the children make each word, we choose one child who has made it correctly to come and make it in a pocket chart. As the lesson begins, the letters *a*, *i*, *m*, *n*, *r*, and *t* are in the pocket chart. The children each have the same letters and a holder. The teacher leads them to make words by saying the following:

Take two letters and make *am*: I *am* your teacher.

Now, change just one letter and you can spell *at*: We are *at* school.

Add a letter to make the three-letter word *rat*.

Now change just one letter and *rat* can become *mat*: In kindergarten you slept on your *mat*. Everyone say *mat*.

Change a letter again and turn your *mat* into a *man*.

Now change just one letter and *man* can become *tan*.

Change *tan* into *ran*.

Now change one letter and change *ran* into *ram*: Our high school’s mascot is a *ram*. Everyone say *ram*.

Let’s make one more three-letter word—*rim*: The top edge of something like a glass is called a *rim*. Everyone say *rim*.



Now, we are going to make some four-letter words. Add one letter to *rim* and you will have *trim*. Trim is another word for decorate: At Christmas, we *trim* the tree. Stretch out the word *trim* and listen to the sounds you hear yourself saying.

Change *trim* to *tram*: You can ride in a *tram*. Everyone say *tram*.

Take out all your letters and start over and make another four-letter word—*main*. You can only hear three sounds in *main*, but it takes four letters to spell it. Think about what letter you can't hear and where to put it.

Now change just one letter and *main* can become *rain*.

Now, let's make a five-letter word. Add just one letter to *rain*, and you will have a *train*.

Has anyone figured out the secret word? I will come around to see if anyone has the secret word.

Children often have trouble figuring out the secret word when it is a name—even though all their letters have a capital letter on one side. If no one has figured out the secret word, we give them a hint, such as, "It's the name of one of the African Americans we have been studying."

Several children quickly figure out their letters can spell *Martin* and a child who had spelled it correctly makes it with the pocket chart letters. Then, everyone makes *Martin* in their holders to finish the first part of the lesson.

For the sorting part of the lesson, we put the words on index cards in the pocket chart. The first sort in this lesson is for beginning sounds. The teacher tells the children to sort out all the words that do not begin with a vowel and put them together in columns with all the same letters up to the vowel. The children are used to sorting for all beginning letters and quickly arrange the pocket chart index cards so that these words are grouped together:

rat	mat	tan	trim
ran	man		tram
ram	main		train
rim	Martin		
rain			



The teacher and children pronounce all the words, paying special attention to the three *t-r* words. They “stretch out” *trim*, *tram*, and *train* and agree that you can hear both the *t* and the *r* “blended together.”

Next, we help them sort the words into rhymes:

am	at	man	main	rim
ram	rat	tan	rain	trim
tram	mat	ran	train	

Once the words are sorted into rhymes, we remind the children that rhyming words can help them read and spell words. We then write two new rhyming words on cards and have them place these words under the rhyming words and use the rhymes to decode them:

swim	Spain
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Finally, we say two rhyming words and help them use the rhyming words to figure out how to spell them:

clan	Spam
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When the lesson ends, the transfer words are lined up under the rhyming words in the pocket chart:

am	at	man	main	rim
ram	rat	tan	rain	trim
tram	mat	ran	train	swim
Spam		clan	Spain	

Making Words lessons teach children many things. The children learn that you pay attention to the sounds in words and figure out the letters so that you can spell and read lots of words. They learn to pay attention to all the letters because changing just one letter results in a new word. They also learn that it matters where you put the letters. Through the transfer words, children learn that knowing phonics helps you decode and spell other words. In short, they develop cognitive clarity about words and why and how we use phonics.

Making Words lessons promote engagement because all children can be successful. We send children who have made words correctly to make them with the big letters and, because we know which children to spotlight for which words, all children experience success. Making Words



lessons are also “hands-on-minds-on” activities in which there are puzzles to be solved:

How can you change one letter and make *trim* become *tram*?

What letter can you add to turn *rain* into *train*?

What is the secret word that can be made with all these letters?

Which rhyming words will help me spell *Spam*?

Manipulating letters and solving puzzles is fun and most children perceive Making Words as a pleasurable activity, thereby increasing their engagement with letters, sounds, and words.

Making Words lessons are multilevel in many ways. Each lesson begins with short, easy words and progresses to larger words, including the secret word. Figuring out the secret word in the limited time available is a challenge for even the most advanced readers. Making Words includes even children with very limited literacy who enjoy manipulating the letters and making the words even if they do not get the larger words completely made until these words are made with the pocket chart letters. By ending each lesson with sorting the words into patterns and then using those patterns to read and spell some new words, we help children of all levels see how you can use the patterns you see in words to read and spell other words.

Making Words lessons develop phonemic awareness when children stretch out words to hear the sounds and the order of these sounds. Sorting the words by beginning letters and then into rhyming words develops another facet of phonemic awareness. Children who listen for sounds and then select letters to represent these sounds and arrange them to make words are practicing sequential decoding. Sorting and using the rhyming patterns helps them learn rhyming patterns, and deciding which rhyming words will help them read and spell the transfer words fosters the analogy decoding strategy.

Using Words You Know. Using Words You Know (Cunningham, 2000) is an activity designed to help students learn to use the words they already know to decode and spell many other words. The activity begins with some known words and then helps children learn how these words they know help them read and spell other words. Following is an example using the known words *bike*, *car*, *van*, and *train*.



The teacher begins the lesson by dividing a chart into four columns and heading each column with *bike*, *car*, *van*, and *train*. The students set up the same columns on a piece of paper and write these four words.

The teacher reminds the students that words that rhyme often have the same spelling pattern and that the spelling pattern in a short word begins with the vowel and goes to the end of the word. The teacher and the children underline the spelling patterns *i-k-e*, *a-r*, *a-n*, and *a-i-n*.

The teacher tells the students that they will be shown some words and that they should write them under the word with the same spelling pattern. The teacher then shows them words written on index cards that have one of these patterns. Students write these words on their papers in the correct columns and the teacher chooses a student to write each word on the chart. After each word is written on the chart, students pronounce the word that heads the column and then the new word, making them rhyme.

Next, the teacher explains that thinking of rhyming words also can help you spell. Now, rather than showing the students words, the teacher says words and the students decide which word they rhyme with and use the spelling patterns to spell them. Just as in the first step, one child writes each word on the chart in the correct column. Here is the chart with the 20 words students have decoded and spelled:

bike	car	van	train
hike	jar	pan	Spain
spike	star	Fran	sprain
Mike	far	than	stain
strike	scar	clan	strain
pike	tar	bran	brain

To make the lesson more multilevel and to show all students that thinking of rhyming patterns can help them read and spell longer words, too, we end the lesson by showing them some longer words and having them use the known words to read them, and by saying some longer words and having them use the rhyming words to spell them. Here is what the chart might look like with these longer words added:

bike	car	van	train
hike	jar	pan	Spain
spike	star	Fran	sprain



Mike	far	than	stain
strike	scar	clan	strain
pike	tar	bran	brain
hitchhike	guitar	trashcan	maintain
motorbike	boxcar		complain
			entertain

When doing Using Words You Know lessons, we always choose the words students will read and spell. We do not ask students for rhyming words, because, especially for the long vowels, there is often another pattern. *Jane* and *rein* also rhyme with *train*, but we only use words that both rhyme and have the same pattern. Later, when students are accustomed to reading and spelling by pattern, we do lessons that help them determine which of two or more patterns to use.

Using Words You Know develops cognitive clarity as students see how paying attention to the patterns in words helps you decode and spell many words. Students become more successful in choosing the right word and that success, plus the completed chart with lots of words, develops their confidence that the words they already know can help them learn to read and spell many other words—including longer words.

There are several things students can learn about words in a Using Words You Know lesson. All the initial letter patterns get reviewed as students blend them with patterns in rhyming words to read and spell new words. Blending the beginning letters with the pattern and determining rhyming words are important phonemic awareness components. Common rhyming patterns are learned and students practice the analogy decoding strategy by deciding which words they know will help them read and spell other words. Including some multisyllabic words makes the activity more multilevel for children who already know many words and patterns.

Reading/Writing Rhymes. Reading/Writing Rhymes (Cunningham, 2000) is an activity that gives students practice using patterns to decode and spell hundreds of words. Once all the rhyming words are generated on a chart, students write rhymes using these words and then read one another's rhymes. Because writing and reading are connected to every lesson, students learn how you use these patterns as you actually read



and write. Here is an example of how one Reading/Writing Rhymes lesson might be carried out.

The teacher distributes an entire set of beginning letter cards to the children. The beginning letter deck contains 50 index letter cards, including

- single consonants: *b c d f g h j k l m n p r s t v w y z*
- digraphs (two letters, one sound): *sh ch wh th*
- other two-letter, one-sound combinations: *ph wr kn qu*
- blends (beginning letters blended together, sometimes called clusters): *bl br cl cr dr fl fr gl gr pl pr sc scr sk sl sm sn sp spr st str sw tr*

Once all the cards are distributed, the teacher writes a spelling pattern eight times on a piece of chart paper. Next, the teacher invites children who have cards that they think make a word to come up and place their card next to one of the written spelling patterns and pronounce the resulting word. If the word is indeed a real word, we use the word in a sentence and write that word on the chart. If the word is not a real word, we explain why we cannot write it on the chart. (If a word is a real word and does rhyme but has a different spelling pattern, such as *planned* to rhyme with *and*, we explain that it rhymes but has a different pattern and include the correct spelling on the bottom of the chart with an asterisk next to it.) We write names with capital letters and if a word can be a name and not a name, such as *Jack* and *jack*, we write it both ways. When all the children who think they can spell words with their beginning letters and the spelling pattern have come up, we call up children to make the words not yet there by saying something like, “I think the person with the *wh* card could come up here and add *wh* to *ack* to make a word we know.”

We try to include all the words that any of the children would have in his or her listening vocabulary, but we avoid obscure words. If the eight patterns we wrote to begin our chart get made into complete words, we add as many more as needed. Finally, if we can think of some good longer words that rhyme and have that spelling pattern, we add them. Of course, because the children do not have all the letters to spell these longer words, the teacher just writes these on the list. Here is what the *ack* chart might look like:

<i>ack</i>			
back	Mack	snack	backpack
jack	pack	shack	fullback



Jack	black	tack	attack
quack	crack	rack	hijack
track	knack	Zack	racetrack
sack	stack	whack	

Once the chart of rhyming words is written, we work together in a shared writing format to write a silly sentence using lots of the rhyming words. Then, the children write a rhyme of their own. Many teachers put the children in small groups or have them work with partners to write these rhymes and then let different children read their rhymes to the class.

To make Reading/Writing Rhymes charts for the patterns with two common spellings, we write both patterns on the same chart. Students come up and tell us the word their beginning letters will make and we write it with the correct pattern. In many cases, there are two homophones, words that are spelled differently and have different meanings but the same pronunciation. We write both of these and talk about what each one means. Here is the chart for the *ail/ale* long vowel spelling pattern:

<i>ail</i>			<i>ale</i>	
bail	nail	trail	Dale	stale
fail	pail	wail	gale	tale
frail	quail	detail	male	whale
Gail	rail	monorail	pale	Yale
hail	sail	toenail	sale	female
jail	snail	cottontail	scale	tattletale
mail	tail			

Cognitive clarity is developed as children combine patterns to create words and see how phonics helps them read and spell words. Using these words to write and read silly sentences is a direct application of phonics knowledge. Because the children are actively engaged in combining their beginning letters to create words and figuring out which beginning letters will make words, children find the activity pleasurable. They also enjoy writing and reading the silly sentences that result from trying to use as many rhyming words as possible.

Reading/Writing Rhymes is a multilevel activity. All beginning letters, including the common single consonants and the less common, more complex digraphs and blends, are reviewed each time the teacher



distributes the beginning letter cards. Phonemic awareness is developed as children say all the rhyming words and blend the vowel pattern with the beginning letters. Children whose word awareness is more sophisticated learn that there are often two spellings for the long vowel patterns and develop their visual checking sense as they see the rhyming words with the different patterns written on the same chart. The addition of some longer rhyming words helps them learn how to decode and spell longer words and allows them to write more interesting rhymes.

Conclusion

How we should teach phonics is not a simple question. The most effective phonics instruction must reflect what we know about teaching and learning as well as what we know about how children decode and spell words. Debate about how to teach phonics can help us provide better instruction for all children, but only if the debaters consider all that is known and avoid simplistic solutions.

There are general instructional principles that apply to everything we teach. All instruction, including phonics instruction, must help learners develop cognitive clarity and become engaged with what they are learning. All instruction, including phonics instruction, must also be as multifaceted and multilevel as possible. Guided reading, self-selected reading, and writing instruction are the methods and components of a complete reading program that best follow these general principles of teaching. Furthermore, we believe that phonics instruction must not take more than one fourth of reading/language arts time or many children's literacy learning ultimately will suffer.

There have been few instructional studies comparing different types of phonics instruction, and those that have been done have usually compared one kind of systematic phonics instruction with hit-or-miss phonics instruction. In trying to determine what type of phonics instruction is most effective, we must look at research findings about how children learn phonics.

Research indicates that children need to develop phonemic awareness and sequential decoding and have regular opportunities to apply their phonics skills. The research, however, does not support a narrow reliance on isolated phonemic awareness and synthetic phonics instruction with highly decodable text as the only or even the best way to teach phonics, let alone reading.



Research also supports teaching children orthographic patterns and analogy decoding, as well as morpheme patterns common in multisyllabic words. Children also learn phonics better when a variety of activities that emphasize transfer are used.

In this chapter, we have presented three such activities—Making Words, Using Words You Know, and Reading/Writing Rhymes—that we have found to be successful in teaching phonics during the one fourth of reading/language arts time we devote to such activities.

Questions for Discussion

1. Examine the National Reading Panel report (2000a, 2000b) or a summary of its findings relative to teaching phonemic awareness and phonics. How did the Panel deal with issues of how children learn in general, or did it? How did it deal with issues of learning to decode by patterns and analogy? What do you think of the Panel's approach to determining what the research base is for decoding instruction versus the approach we took in this chapter?
2. Examine the National Research Council report titled *Preventing Reading Difficulties in Young Children* (Snow, Burns, & Griffin, 1998) or a summary of its findings relative to teaching phonemic awareness and phonics. How did the authors deal with issues of how children learn in general, or did they? How did they deal with issues of learning to decode by patterns and analogy? What do you think of their approach to determining what the research base is for decoding instruction versus the approach we took in this chapter?
3. A number of commercial phonics instructional programs are available. Considering the ones you know or can access, determine what research base(s) they seem to have. Do they consider research on both learning phonics and how children learn in general? If you have access to such programs from 25 or more years ago, compare the newer with the older programs to determine the impact, if any, of the research on learning and phonics published in the last two decades or so.
4. Consider how reading is usually assessed in the schools in your area. Because assessment always plays a major role in how we teach, consider to what extent there is a match among the reading assessments used, the phonics instruction provided, and how children learn.



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