## CHAPTER 2

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# The Scientifically Based Reading Research Approach to Early Literacy Instruction

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The 1980s and early 1990s were relatively peaceful years in the field of early childhood literacy instruction. Unlike elementary grade reading instruction, which was locked in a seemingly endless series of "reading wars," there was a fairly widespread consensus as to how preschool-age children could best be prepared to learn to read. During this period, emergent literacy theory was the dominant perspective (Teale & Sulzby, 1986). According to this view, young children acquire written language in much the same way they acquire oral language—by observing written language in use, generating their own concepts and rules about how reading and writing work, then trying these out in social situations. Strategies emanating from emergent literacy were considered to constitute "best practice" in early childhood language arts instruction: print-rich classroom environments, frequent story reading, and opportunities for children to engage in meaningful emergent reading and writing activities such as literacy-enriched dramatic play (Christie, Enz, & Vukelich, 2007; Yaden, Rowe, & MacGillivary, 2000).

During this period of apparent calm, however, a storm was brewing. Two major shifts in early literacy policy were underway: (1) the standards movement, which has resulted in the rapid growth of state-level early childhood academic standards (Neuman & Roskos, 2005); and (2) the movement to prevent reading difficulties, which viewed failure to learn to read as a national public health crisis (Snow, Burns, & Griffin, 1998; Sweet, 2004). Roskos and Christie (2007, p. 89) point out that "underlying both initiatives is the premise that skill begets skill in a dynamic process—skills gained early in life help children gain additional skills in the next stage of development. . . . As a corollary, skills missed early in life are hard to compensate for later on."

By the late 1990s, many policymakers became disenchanted with the education establishment's rather relaxed emergent literacy approach to early reading instruction. There was an increased call for effective "science-based" methods of instruction to turn back the tide of rising reading disabilities. For example, Robert Sweet (2004, p. 18), a professional staff member of the Committee on Education and the Workforce for the U.S. House of Representatives, stated:

> Publishing companies have continued to sell textbooks that are based on the false premise that students learn to read naturally. Many teachers are still being trained in a method of instruction that is failing millions of students. . . . Illiterate prisoners, welfare recipients unable to read simple instructions on a medicine bottle, school dropouts that have given up school because they cannot read their assignments . . . and special education students who are placed on lifetime career paths simply because they have not been taught to read are all being shortchanged all because the education industry refuses to adopt the clear findings of scientific research supporting specific instructional practices that could reverse the terrible blight of illiteracy in America.

As Sweet's comment indicates, the paradigm shift that emerged in the field of education emphasized the importance of using science to inform practices and policies. The field of early childhood education has not been immune from such shifts, as discussed in the remainder of this chapter. A new perspective on early literacy known as scientifically based reading research (SBRR) has come into prominence and has had a tremendous influence on preschool language arts instruction. The chapter begins by defining SBRR and discussing the main tenets of this perspective. The controversy surrounding this perspective is also discussed. Then each of the "core" SBRR early literacy skills—vocabulary, phonological awareness, alphabet knowledge, and print awareness—is defined, and examples of how each skill can be directly taught to preschool children are provided.

## SBRR Defined

The term "scientifically based research" was specifically defined in the No Child Left Behind Act. This legislation identified several features that must be present to meet the criteria of scientifically based research, as shown in Table 2.1. Because this definition of "scientifically based" research specified a preference for "experimental or quasi-experimental" methods, attention turned away from use of evidence derived from the qualitative studies favored by proponents of emergent literacy toward the types of quantitative studies that were popular in the fields of educational psychology and special education. The result was the rise of a new perspective on early literacy commonly referred to as Scientifically Based Reading Research (SBRR). Supporters of SBRR believe that rigorous experimental and correlational research can reveal (1) the skills and concepts young children need to master to become proficient readers and writers, and (2) the most effective strategies for teaching these skills and concepts to children.

The SBRR perspective was first introduced in Marilyn Adams's (1990) landmark book *Beginning to Read: Thinking and Learning about Print* and gained additional momentum with the publication of the

**TABLE 2.1. No Child Left Behind's Definition of Scientifically Based Research**

Scientifically based research includes research that:

(i) employs systematic, empirical methods that draw on observations or experiment;

(ii) involves rigorous data analyses that are adequate to test the stated hypotheses and justify the general conclusions drawn;

(iii) relies on measurements or observational methods that provide reliable and valid data across evaluators and observers, across multiple measurements and observations, and actual studies by the same or different investigators;

(iv) is evaluated using experimental or quasi-experimental designs in which individuals, entities, programs, or activities are assigned to different conditions with appropriate controls to evaluate the effects of the condition of interest, with a preference for random-assignment experiments, or other designs to the extent that those designs contain within-condition or across-condition;

(v) ensures that experimental studies are presented in sufficient detail and clarity to allow for replication, or, at a minimum, offer the opportunity to build systematically on their findings; and

(vi) has been accepted by a peer-reviewed journal or approved by a panel of independent experts through a comparably rigorous, objective, and scientific review.

*Note*. From No Child Left Behind Act of 2001 (pp. 126–127).

National Research Council's book, *Preventing Reading Difficulties in Young Children* (Snow et al., 1998). Adams (1990) introduced the concept of basing instruction on research about what young children need to know to be successful readers, and placed considerable stress on the importance of phonemic awareness and understanding of the alphabetic principle. *Preventing Reading Difficulties in Young Children*, edited by Snow and associates, specifically emphasized using empirical evidence or "science" to discover: (1) strong predictors of success and failure in reading, and (2) effective strategies for preventing reading difficulties. More recently, the scientifically based perspective has been used as the foundation for many initiatives by the U.S. Department of Education, including Good Start, Grow Smart, and the Early Reading First and Early Childhood Professional Development grant programs designed to increase the school readiness of low-income children by providing them with print-rich environments and science-based instruction on oral language, phonological awareness, alphabet knowledge, and print awareness.

In her booklet *Teaching Reading Is Rocket Science,* Louisa Moats (1999, p. 5) sums up the essence of the SBRR approach:

> Low reading achievement, more than any other factor, is the root cause of chronically underperforming schools, which harm students and contribute to a loss of public confidence in our school system. . . . Thanks to new scientific research—plus a long-awaited scientific and political consensus around this research—the knowledge exists to teach all but a handful of severely disabled children to read well. . . . In medicine, if research found new ways to save lives, health care professionals would adopt these methods as quickly as possible, and would change practices, procedures, and systems. Educational research has found new ways to save young minds by helping them to become proficient readers; it is up to us to promote these new methods throughout the education system.

Analogies between early literacy instruction, science, and the field of medicine have become a hallmark of the SBRR approach, and some of the major SBRR initiatives have been funded by the National Institute of Health (Lyon, 1998). This invocation of "hard science" and the medical model has caused some chagrin in the field of educational research in general and in literacy education in particular. In his critique of the National Research Council report that set SBRR into motion, David Berliner (2002, p. 18) pointed out, "It is not clear to me that *science* means the same thing to all who pay it homage, nor do I think that the distinctions between educational science and the other sciences have been well made." Noted language researcher Frank Smith (2003, p. vii) is even more blunt: "Reading instruction that is claimed to be 'scientific,' 'research-based,' and 'evidence-based'—imposed on many teachers and enforced

through innumerable mandated tests—is founded on activities that are unspeakable and practices that are unnatural."

The harshest criticisms of SBRR are aimed at programs that provide children with a strict diet of direct instruction on core literacy skills and little else. However, SBRR instruction does not need to comprise only mindless drill and practice. In the remainder of this chapter, I demonstrate how SBRR instruction can be delivered in an engaging and age-appropriate manner to help preschoolers learn the skills they need to succeed in learning to read.

## Core Science-Based Knowledge and Skills

Perhaps the most valuable contribution of the SBRR movement is that it has identified the "core" knowledge and skills that young children must have to become successful readers (see McCardle & Chhabra, 2004; Snow et al., 1998). Longitudinal studies have shown that preschool-age children's *oral language* (expressive and receptive language, including vocabulary development), *phonological awareness*, and *alphabet knowledge* are predictive of reading achievement in the elementary grades. *Print awareness*, which includes concepts (e.g., understanding how print can be used) and conventions (e.g., left-to-right, top-to-bottom sequence) of print, has also been found to be positively correlated with reading ability in the primary grades. These skills, sometimes referred to as the "Big Four," are the primary instructional objectives of SBRR programs within the field of education.

SBRR investigators have also focused on identifying effective strategies for teaching this core literacy content to young children. One of the most consistent research findings is that young children's phonological awareness and alphabet knowledge can be increased via *direct, systematic instruction* (National Reading Panel, 2000; Snow et al., 1998). This instruction may not only take the form of games and other engaging activities but it also involves preplanning and contains the elements of direct instruction: teacher modeling, guided practice, and independent practice. This emphasis on systematic instruction contrasts with the highly individualized instruction advocated by proponents of emergent literacy. For example, SBRR instruction usually involves systematic instruction on the letters of alphabet (all children are taught the same letters in the same order), whereas the emergent literacy approach advocates "personalizing" alphabetic instruction (e.g., teaching children the letters in their own names and in personally meaningful words). Of course, many teachers use a combined approach, teaching letters in a systematic way to the whole class and teaching highly salient letters to individual students.

To illustrate the nature of SBRR instruction, the remainder of this chapter presents descriptive vignettes of how children were taught the "core" early literacy skills with SBRR approaches in an Early Reading First project in southwest Arizona. All of the children were from low-income households, and more than 90% were English language learners. The sections that follow illustrate how each of the "Big Four" instructional objectives of Early Reading First—vocabulary, phonological awareness, alphabet knowledge, and print awareness—was taught in this project. The examples are intended to give readers the "feel" of developmentally appropriate, science-based early literacy instruction.

## Vocabulary Instruction

"Vocabulary" refers to children's knowledge of word meanings. Although vocabulary acquisition is one of the key components of oral language development, it also plays an important role in early literacy. Research has shown that the size of children's vocabulary at age 3 is strongly associated with reading comprehension at the end of third grade (Hart & Risley, 2003). Research has also shown that vocabulary growth is promoted through direct instruction of targeted words and by arrangement of experiences so that children encounter these targeted words frequently in different contexts (McCardle & Chhabra, 2004). Because vocabulary size and rate of growth are central to the acquisition of early literacy skills, vocabulary development is one of the key instructional objectives in SBRR programs.

Early childhood teachers have traditionally used incidental approaches to provide vocabulary instruction, looking for "teachable moments" during storybook reading and classroom conversations to build children's knowledge of word meanings. What is new in SBRR programs is that vocabulary instruction is intentional and preplanned, as well as incidental. Specifically, teachers decide in advance to teach selected words to children, and both high-utility root words (Biemiller & Slonim, 2001) and rare words (Hirsch, 2003) are targeted for instruction. "High-utility root words" refer to uninflected words that occur with high frequency in oral language. These words are useful to know because they can be used to create many related words (*move* → *moved*, *moveable*, *remove*, etc.). "Rare words" refer to specialized vocabulary needed for development of domain knowledge in content areas (e.g., *excavate*, *backhoe*, *scoop*, *blueprint, plaster*, etc.). Often, these targeted words are connected to other parts of the academic curriculum—an ongoing thematic unit, books that are being read, field trips, and so forth. These vocabulary–curriculum connections provide opportunities for children to encounter the targeted

words repeatedly in a short period of time—a crucial factor in word learning (Stahl, 2003).

## Example: Integrated Vocabulary Instruction

San Luis Preschool teacher Mrs. Lopez uses a published curriculum to teach early literacy skills to the English language learners in her classroom. The curriculum is organized into thematic units centering on sets of children's books. This month, Mrs. Lopez's class is studying building and construction. The curriculum has identified approximately 20 target words that are to be directly taught to children, including the names of tools (*hammer, saw, safety goggles, tape measure, nails*) and construction equipment (*dump truck, backhoe, crane*). In addition, there are another 100+ "wonderful words" related to the construction theme that teachers are encouraged to use incidentally when the opportunity arises. On this particular day, Mrs. Lopez is teaching the target "tool" words. She begins circle time with the shared reading of a rhyme poster. Whereas the primary function of the poster is to teach rhyme identification, Mrs. Lopez also focuses the children's attention on the two "tool" words in the rhyme. She has children make a hand motion when *hammer* is mentioned and use their fingers to show how small the *tiny little nails* are. Next, Mrs. Lopez delivers a shared reading of a big book about building a doghouse. This informational book has very few text words but contains several photographs that contain pictures of tools. Even though the tools are not mentioned in the text, Mrs. Lopez pauses to discuss them. She first asks, "What kind of tools will they need to build the doghouse?" As she reads each page, she points to each of the tools in the illustrations and asks, "Does anyone know the name of this tool?" She chuckles when, after pointing to several nails in one picture, a child responds, "Tiny little nails," repeating the phrase used earlier in the rhyme poster. After the story is read, children go to center time. Mrs. Lopez has arranged the environment to provide additional opportunities to encounter and use tool words. Several regular-size copies of the doghouse book have been placed in the classroom library for independent or partner reading. There are blackline masters of tools for the children to color and label in the art center. Finally, the dramatic play center has a cardboard frame that resembles a doghouse, and it contains toy replicas of all of the tools mentioned in the doghouse book: plastic hammers, nails (actually wood golf tees), measuring tape, safety goggles, and a toy circular saw. Two girls and a boy spend a half hour playing together, pretending to build a doghouse. In this play, the names of tools are used numerous times, and the children help each other learn how to use each tool properly. For example, one of the girls reminds the boy to put on his safety goggles when using the saw!

Mrs. Lopez's instruction is consistent with the tenets of SBRR, because she directly teaches the meanings of preselected vocabulary words (in this case, the names of tools) and provides series of related activities that give children repeated opportunities to hear and use these words. This type of planned, intentional vocabulary instruction increases the likelihood that these words will become part of the children's receptive and expressive lexicon.

## Phonological Awareness Instruction

Phonological awareness refers to an individual's awareness of the sound structure of speech. Phonemic awareness, an advanced stage of phonological awareness, involves awareness that spoken words are composed of individual sounds, or phonemes (e.g., *cat* is made up of the sounds /k/, /ă/, and /t/). Research has clearly established that these phonological processing skills, when measured in early childhood, are strong predictors of later reading achievement (Dickinson, McCabe, Anastaspoulos, Peisner-Feinberg, & Poe, 2003; National Reading Panel, 2000).

Research also has revealed a developmental trajectory in children's acquisition of phonological processing skills, as shown in Table 2.2. In general the movement of instruction is from larger to smaller units. Marilyn Adams (1990) suggests that before young children can become aware of phonemes—the individual sounds that make up spoken words—they first must become aware of larger units of oral language. Thus, children must first realize that spoken language is composed of words, syllables, and sounds. For example, they need to learn to recognize when words end with the same sound (i.e., rhyme) and begin with the same sound (i.e.,

**TABLE 2.2. Phonological Processing Skills**

Phonological awareness

1. Rhyme—words that end with same sound
2. Alliteration—words that start with same sound
3. Word and syllable segmentation—divide sentences into individual words and words into syllables

Phonemic awareness

4. Phoneme isolation (/fan/, /fork/, and /film/ begin with /f/ sound)
5. Phoneme blending (/d-o-g/ = /dog/)
6. Phoneme segmentation /dog/ = /d-o-g/
7. Phoneme manipulation
   - Deletion /train/ – /t/ = /rain/
   - Addition /f/ + /arm/ = /farm/
   - Manipulation /rat/ – /a/ + /o/ = /rot/

alliteration). They also need to be able to segment sentences into words, and words into syllables. Once these skills are mastered, children can begin to focus on the individual sounds of language and develop phonemic awareness. When children have fully mastered phonemic awareness, they are able to take individual sounds and blend them into whole words, break words down into individual sounds, and even manipulate the sounds in words (e.g., replace the middle sound of a word with another sound, so that *cat* become *cut*, and *fan* becomes *fun*). This in turn lays the foundation for learning letter–sound relationships. In the next sections, I describe how teachers can adhere to principles of SBRR to help preschoolers develop an awareness of rhyme and alliteration.

## Example: Rhyme Instruction

As mentioned earlier, San Luis Preschool teacher Mrs. Lopez uses song/rhyme posters from the project's curriculum to help her children learn to identify rhyming words and to learn word meanings. One day, she delivers a shared reading of the rhyme *Five Red Apples*:

> Five red apples in a grocery store,
> I bought one and then there were four.
> Four red apples in an apple tree,
> I ate one, and then there were three.

Mrs. Lopez reads the rhyme to her children several times on successive days. After the children have become familiar with the rhyme and its vocabulary, she begins to focus their attention on the rhyming words by pausing before the rhyming words and waiting for the children to supply the missing word. She tells the children, "We're going to read the *Five Red Apples* poster and I want you to tell me the word that I'm leaving out." She begins by reading, "Five red apples in a grocery store, I bought one and then there were. . . . " Several children shout out, "Four!" Mrs. Lopez responds, "That's right, *four*. OK, let's all say *four*," and all the children respond. Mrs. Lopez continues, "Four red apples in an apple tree, I ate one, and then there were . . . . " This time most of the children respond with "Three!" Mrs. Lopez says, "That's right, boys and girls, *three*. Listen to the words *tree* and *three*. They both end with the same sound. Words that end with the same sound are called rhyming words." She continues this pattern for the rest of the rhyme. On a subsequent day, Mrs. Lopez goes a step further and asks children to supply words that fit the rhyme pattern. For example, after reading the first rhyme segment in *Five Red Apples*, Mrs. Lopez says, "Yes, *store* and *four* both end with the same sound. Can you think of other words that rhyme with *store* and *four*?" The children come up with two: *more* and *poor*. Later, Mrs. Lopez will reinforce the

concept of rhyme by having children play a rhyme categorization game in which they match objects (e.g., a miniature baseball bat, a real key) with pictures of objects that end with the same sound (e.g., hat and bee).

### Example: Syllable Segmenting

Mrs. Vallejo, who teaches in a "reverse mainstream" preschool classroom in the Somerton School District in southwestern Arizona, is in the middle of a thematic unit on water and sea creatures. She focuses her instruction on syllable segmenting. First comes the "Name" part of the lesson. Mrs. Vallejo holds up a card with a child's first name written on it and asks the children to say whose name is on the card. The children then clap and count the number of syllables in the name. Mrs. Vallejo has been working with her children on this skill for several weeks, and they have become quite good at this. They quickly say the names (e.g., "Azael") and number of syllables ("three") for each card that Mrs. Vallejo holds up. The children enjoy the activity and are very engaged. Next up is the "Poster" part of the lesson. Mrs. Vallejo first asks children how many syllables are in the word *poster*, and the children shout out "Two!" Then she reads the rhyme poster, which is about a submarine. Although the main purpose of the poster is to teach rhyme recognition, Mrs. Vallejo focuses on both vocabulary and syllable segmenting. She reads the poster with the children, encouraging them to make motions that go with rhyme (e.g., putting their fingers together to make pretend glasses for the word *periscope*). Then she asks individual children to count the syllables in several words from the story (e.g., sub-mar-ine). The academic level of these activities is quite high for preschoolers who are learning English as a second language, especially because two-thirds of the children in this reverse mainstreamed classroom have been identified as having special needs. But all students seem able to participate successfully (two assistant teachers are there to help), and they appear to enjoy showing off their rapidly growing literacy skills.

These examples of phonological awareness instruction are consistent with the SBRR perspective. Mrs. Lopez and Mrs. Vallejo are both focusing their instruction on science-based skills: rhyme identification and production, and syllabic segmentation. This instruction is carefully planned rather than incidental. Mrs. Lopez does more than simply read the rhyme poster to the children. She provides children with opportunities to use their knowledge of rhyme to fill in missing words in the rhyme, and she explicitly explains the concept of rhyme. She then provides opportunities for children to produce rhymes that match the pattern in the poster. Mrs. Vallejo has taught her students to clap and count the number of syllables in words. In the earlier example, she provides children with repeated

opportunities to practice these skills as she also teaches other skills, such as print recognition and vocabulary.

## Alphabet Instruction

The ability to recognize and name the letters of the alphabet in kindergarten is a strong predictor of later reading achievement (Chall, 1996), and the National Early Literacy Panel has identified alphabet knowledge as a core component of early literacy instruction (Strickland & Shanahan, 2004). Alphabet knowledge can be divided into two subskills: identification and naming. Alphabetic identification involves being able to point out a letter that someone else names. For example, a teacher might ask a child to point to the letter *C* on an alphabet frieze (a chart that lists all of the letters in alphabetical order). Alphabetic naming requires naming a letter that someone else points to. For example, the teacher could point to the letter *C* on the alphabet chart and ask, "What's the name of this letter?" Of the two skills, naming is the more difficult.

In the next sections, I provide examples of how letter posters and the ABC Word Wall can be used to teach alphabet knowledge.

### Example: Letter Posters

San Luis Preschool teacher, Mrs. Lopez, systematically introduces her children to a letter and its sound every two weeks, using letter posters in the *Sound, Rhyme, and Letter Time* (Wright Group/McGraw-Hill, 2002) program. These posters contain large upper- and lowercase letters and pictures of objects that begin with the "target" letter. For example, the letter *S* poster has pictures of a sun, a seal, a sailboat, a sandwich, sand, sunglasses, and a seashell. During the first week, Mrs. Lopez focuses on the sound of the letter, helping children to realize that all of the objects on the chart start with the same sound, /s/. During the second week, Mrs. Lopez teaches children about the letter *S*. She begins by reviewing the words represented on the poster, reminding the children that all these words begin with the /s/ sound. Next, she writes a label for each picture on a Post-it note, with the initial letter *S* in red and the rest of the letters in black. One by one, she places the Post-it labels on the pictures, having children say the names of the objects represented by the pictures. She points out that all of the words start with the same letter *S*. Next, Mrs. Lopez removes the Post-it labels from the poster and has children put the labels back on the chart next to the corresponding object. When they do this, Mrs. Lopez asks them to say the letter name, the letter sound, and the whole word. This is repeated over several days, so that all of the chil-

dren get several turns. Mrs. Lopez also shows children how to write the letter *S* and gives them opportunities to write it on individual chalkboards and in their journals. By using this 2-week routine with each letter, Ms. Lopez is helping her children develop phonemic awareness and alphabetic recognition. Advanced children may also begin learning phonics by making connections between the letters and the sounds they represent.

### Example: ABC Word Wall

Mrs. Lopez also uses an ABC Word Wall to teach alphabet knowledge. Large upper- and lowercase letters are arranged on the wall in alphabetical order. Printed words that begin with each letter are posted below, with visual support (a drawing or photograph) whenever possible. Each day, one or two special words are selected for placement on the word wall. These words can come from the stories, rhymes, songs, and poems that the class is reading. Words can also include children's names, familiar environmental print, and words from thematic units. These words are placed under the letters that they start with. Mrs. Lopez uses her word wall during transitions from large- to small-group instruction. She hands the pointer to a child and asks him or her to point to a letter that she says (letter identification), or Mrs. Lopez will point to a letter on the word wall and ask the child to name the letter. Each child gets a turn before leaving to go to the next activity, and Mrs. Lopez helps those who have difficulty. The children can usually point to or name the letters, because the pictures that go with the words and the familiar environmental print give helpful clues. This strategy promotes smooth transitions and gives children valuable practice with letters.

Mrs. Lopez' alphabetic instruction with the letter posters and her word wall are aligned with the principles of SBRR. She uses the posters systematically to teach children the letters of the alphabet in a preplanned order. She then uses the ABC Word Wall to provide opportunities for children to practice the alphabetic identification and naming skills they have been taught. Mrs. Lopez also provides individualized instruction, helping children learn the letters in their names and pointing out the names of letters that occur in salient environmental print. So her students are receiving a blend of SBRR instruction and the type of alphabetic instruction advocated by the emergent literacy perspective.

## Print Awareness Instruction

"Print awareness" is a broad term that refers to children's ability to recognize print, ranging from contextualized environmental print (e.g., the word *Cheerios* on a cereal box) to decontextualized written words (e.g., the

print in a children's book). Print awareness also encompasses concepts about print, including book concepts (author, illustrator, title, front, back) and conventions of print (directionality, capitalization, punctuation). Research has shown that young children's knowledge of concepts of print is moderately correlated with reading ability in the primary grades (Snow et al., 1998); thus, concepts of print are an instructional objective of SBRR instruction.

Concepts about print are strongly associated with the emergent literacy perspective, and these concepts are usually taught via shared reading of storybooks, shared writing (i.e., language experience dictation), and literacy-enriched play. Teachers who are firm believers in the SBRR philosophy may also use more direct forms of instruction to teach concepts about print.

### Example: Environmental Print

Head Start teacher Mrs. Fernandez uses direct instruction to help her children in San Luis, Arizona, learn to recognize environmental print. She begins by pointing to words she has written at the top of a whiteboard—*I Can Read So Many Things*—and reads them to the class. She tells the children that this is the title of a book that they are going to write. Mrs. Fernandez then discusses how the children see many signs and symbols when they are riding around their community with their parents. She also tells the children about other places where they might encounter environmental print, such as cereal boxes and soda cans. She has a basket with pieces of paper that contain environmental print (drawing of a stop sign, a McDonald's logo, the logo of a local grocery store, a Pepsi logo, etc.), and she has written the phrase "I can read. . . . " repeatedly on the whiteboard. Individual children come up and take a piece of paper out of the basket, identify what the print says, then tape it onto the end of one of the unfinished sentences on the whiteboard. For example, Javier picks a Pizza Hut logo. He "reads" the logo, then tapes it on to the end of one of the sentences on the whiteboard. This produces the sentence, "I can read Pizza Hut." Javier then takes a pointer and tracks the print while the whole class reads this sentence. When the activity is finished, Mrs. Fernandez leaves the whiteboard up for several days for children to read with their friends during center time.

### Example: Picture–Word–Letter Categorization

Mrs. Fernandez also uses direct instruction to help her children learn about the distinction between pictures, words, and alphabet letters. Mrs. Fernandez has prepared a large chart with three columns labeled "Picture," "Word," and "Letter." An example of each type of symbol is pasted

next to the label: There is a photograph of an automobile next to the label "Picture"; the written word *cat* is next to the label "Word"; and the letter *A* is next to the label "Letter." Mrs. Fernandez has put a number of cards into a bag. Each card contains an example of a picture, a word, or a letter. She begins by explaining each of these concepts. The children are very interested, and several of them quickly recognize the examples that Ms. Fernandez has provided ("That's an *A*" and "It's *cat*"). Children take turns drawing a card out of the basket. When a child has drawn a card, he or she tells the class what is on the card, names the category to which it belongs, and tapes it to the correct column on the chart. If a child struggles, classmates help out. For example, Andrea picks a card with a classmate's name on it. She recognizes the name and says "Elias." Ms. Fernandez prompts her with the question, "Which type is it? A picture, word, or letter?" When Andrea does not respond, several classmates chime in: "It's a word." Andrea then places the card in the correct column and feels proud that she has done this correctly. The metalinguistic concepts of letter and word are quite abstract, but this direct instruction appears to be helping these 4-year-olds make the distinction between the two.

Mrs. Fernandez's instruction on environmental print recognition and the distinction between pictures, words, and alphabet letters are consistent with SBRR principles. She uses carefully planned, direct instruction to teach these print awareness skills. Mrs. Fernandez also takes advantage of "teachable moments" to teach these skills during shared reading, shared writing, and literacy-enriched play activity. However, she believes that direct instruction helps to ensure that all the children in her classroom have an opportunity to learn these important skills.

## Conclusions

The examples from the Early Reading First project illustrate basic characteristic of the SBRR approach as applied to preschool literacy instruction, namely, that teachers are engaging in the direct instruction of core early literacy skills and content. The instruction is focused and relatively brief, with most of the lessons lasting between 5 and 10 minutes, often with several shifts in activity. The fact the children are highly engaged and able to participate successfully indicates that this instruction is also age-appropriate.

As mentioned earlier, direct instruction is not the only type of learning experience these children received. The program also included regular shared reading that focused on enjoyment of story, shared writing (language experience dictation), print-rich classrooms filled with functional and environmental print, and literacy-enriched play centers. This "blend-

ing" of SBRR and emergent literacy strategies provides children with the best of both approaches, creating a mix of learning opportunities that should meet the needs of most young learners (Christie et al., 2007).

Blending SBRR instruction with emergent literacy strategies is a value-added proposition (Christie et al., 2007). Young children still receive opportunities for meaningful engagements with reading and writing, and social support. However, they also are taught directly the important skills that they need to engage successfully in these activities. When SBRR instruction is blended with emergent literacy strategies, the bar is raised. Children have better opportunities to learn literacy skills and content than they did in programs that strictly adhered to the emergent literacy point of view.

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