Shared Book-Reading Research and Content Learning

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THE PURPOSE OF THIS CHAPTER IS to establish the importance of interactive shared book reading as a tool for developing preschool children's oral language and comprehension abilities. We will summarize what we know about the most effective book-reading practices from the last 25 years of research and the purpose of shared book reading within the context of language development and content learning. The approach we introduce here was implemented with children from high-poverty settings in Project Words of Oral Reading and Language Development (WORLD). We will further describe Project WORLD in subsequent chapters.

KEY IDEAS | The key ideas discussed in this chapter are as follows:

1. Gaps in children's language and world knowledge begin early and are evident in preschool.

2. Teachers can read and talk about books with children in ways that boost children's oral language abilities and conceptual knowledge.

3. Shared book reading is more effective when an adult listens to oral responses in book conversations and, in response to children's understanding, extends children's language and learning through a discussion with feedback and confirmation.

4. Building networks of knowledge and connected vocabulary concepts establishes a foundation for future academic learning and text comprehension.

Shared book reading is a process of talking about books that occurs between an adult and a child or children when reading or looking at books (What Works Clearinghouse [WWC], 2006). Also known as read-alouds, book sharing, and storybook reading, it is the primary instructional approach to promoting young children's vocabulary acquisition (Ezell & Justice, 2005; Hargrave & Sénéchal, 2000; Whitehurst & Lonigan, 1998), and it is a method that lends itself to the

development of *content-related vocabulary and knowledge* (e.g., science, social studies; Gonzalez, Pollard-Durodola, Taylor, Simmons, Davis, & Simmons, 2011; Neuman & Dwyer, 2011; Pollard-Durodola et al., 2011). In the following excerpt from a shared book-reading dialogue, Ms. Thomas uses the informational text *Amazing Water* (Berger, 1996) as a springboard for a science discussion with a small group of preschool children. An informational text is a type of book that conveys facts and usually is written by an expert (Duke, 2003). It differs from a storybook, which is a type of text that usually has a character (e.g., person, animal) who resolves a problem through a sequence of events (plot; Mantzicopoulus & Patrick, 2011). Ms. Thomas has selected the informational text *Amazing Water* because it can be used to teach important concepts about water.

In this lesson, Ms. Thomas organizes book-reading content by a science theme (*nature*) and topic (*water*) that allow her to explicitly teach three new words (i.e., *liquid, frozen,* and *solid*) from *Amazing Water* that are related to important concepts that children will be learning that week. In this discussion, children learn about what water can do. They learn that water is a *liquid,* that a *liquid* can freeze, and that something *frozen,* such as ice, is a *solid.* When appropriate, Ms. Thomas also extends children's understandings of the science terms *liquid, frozen,* and *solid* beyond their application to water (e.g., *solid* objects in a classroom, other types of *liquid*).

This interactive discussion occurs before reading *Amazing Water* to expand children's knowledge of concepts and words to which they may not be exposed in daily life (Neuman & Roskos, 2007). In shared book-reading lessons, content-related book discussions can take place before, while, or after reading a selected text. In this scenario, Ms. Thomas explicitly previews important vocabulary concepts prior to reading *Amazing Water* so that children are better prepared to comprehend the content of the book as it is read.

In addition to extending their word and world knowledge, Ms. Thomas's goal is to extend the children's oral language abilities by encouraging them to use these science-related vocabulary words to talk about connected life experiences. Such language, word, and knowledge extensions allow children to acquire new information and participate in academic discussions. These connections and extensions are especially important for children from low-income communities who enter school with vocabulary and knowledge gaps that place them at risk of comprehension difficulties.

Instructional Science Vignette: What Can Water Do?

Discussion Before Reading *Amazing Water*

Ms. Thomas: This week, we're going to read books that teach us about nature. Nature consists of things that are not made by people, such as water, air, and sunlight. Look at this picture about nature. Let's name and talk about the parts of nature that you see in these

pictures. *[Children identify and talk about the sun, icicles, snow-covered trees, and swirling water.]*

In our new book, we'll listen for three new words. These new words will help us learn about water and what water can do. Let's practice them *before* reading the book.

⭐ **TEACHING STRATEGY:** Use a visual to depict a vocabulary concept.

[She holds an 8 ½ × 11 picture/concept card of a glass filled with water.]

Ms. Thomas: Look at this picture. Our first new word is *liquid.* A *liquid* is something such as water or juice. In this picture, water is a *liquid.* It is wet. What is this, everyone?

Children: *Liquid!*

Ms. Thomas: Let's point to the *liquid* in this picture. *[Everyone points.]*

⭐ **TEACHING STRATEGY:** Extend children's conceptual knowledge.

Ms. Thomas: Besides water, there are many other types of *liquids.* There is *liquid* paint, soup, and detergent for washing our clothes. And look at this *liquid* glue. Benjamin, I see that you want to say something! What is your favorite *liquid* and why?

Child: Juice.

Ms. Thomas: I like juice, too. Say, "My favorite *liquid* is juice."

Child: My favorite *liquid* is juice.

Ms. Thomas: Okay, why do you like juice?

Child: It's cold and sweet.

Ms. Thomas: That's a good explanation. You like juice because it is cold and sweet!

Can you think of a *liquid* that we use to soften our skin? What type of *liquid* is in this bottle?

Child: That's lotion.

Ms. Thomas: Yes, the *liquid* in this bottle is a lotion.

⭐ **TEACHING STRATEGY:** Use a visual to depict a vocabulary concept.

[She points to a picture/concept card of icicles on a tree.]

Here's our second new word. Look at this picture. Did you know this is *frozen* water? Everyone say, "It's *frozen* water." *[Children repeat.]*

If something is *frozen*, it is hard and cold. Ice is something that is *frozen*, or hard and cold. In this picture, the water on the branch is *frozen*, or cold and hard. Everyone, what is this?

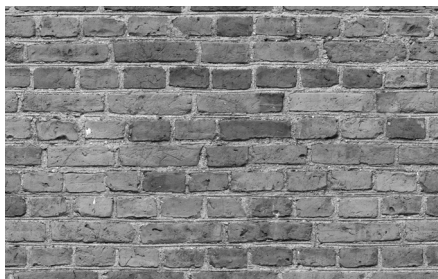|	
Children:	*Frozen.*
Ms. Thomas:	What are some things you know that are *frozen*?
Child:	Popsicles!
Ms. Thomas:	Yes, Popsicles are *frozen.* Let's say that together: *Popsicles are frozen. [Children repeat.]* What are some other examples of *frozen* water?
Child:	The lake in the park.
Ms. Thomas:	Yes, the lake in the park is *frozen* this morning. In fact, there were geese sitting on the *frozen* lake this morning.
Child:	Water *frozen* on the sidewalk.
Ms. Thomas:	Yes, there is *frozen* water on the sidewalk. What do we call *frozen* water? *[There is a discussion about the ice on the sidewalk.]*
Ms. Thomas:	We have one more new word to learn that we will listen for in our book.

⭐ **TEACHING STRATEGY:** Use a visual to depict a vocabulary concept.

[She holds a picture/concept card showing a brick wall.]

Ms. Thomas:	This is a *solid*. A *solid* is something hard, such as wood or rocks. In this picture, the bricks are *solid.* They are hard. What is this, everyone?
Children:	*Solid.*
Ms. Thomas:	When water is *frozen*, it is a *solid*, so it feels hard. Besides *frozen* water, there are many other examples of *solid* objects. What do you see in this room that is a *solid*? *[Silence. The silence indicates that some children may need clarification or further explanation to understand the concept of* solid.*]*
Child:	Rocks.
Ms. Thomas:	Yes, the rocks on the science table are *solid.*

⭐ **TEACHING STRATEGY:** Scaffold with an explanation.

They are *solid* because they feel hard when you touch them. What else in the room is a *solid?*

⭐ **TEACHING STRATEGY:** Scaffold with additional examples.

I see maps on the walls that are *solids,* and I see lights on the ceiling that are *solids.* If I touched them, they would feel hard. What else in the room is a *solid?*

Child: The table.

Child: The little sticks in the bird's nest.

Child: Coats and caps.

⭐ **TEACHING STRATEGY:** Model appropriate language use and more complex sentence structures.

Ms. Thomas: Yes, the wooden table and the wooden chairs are also *solids.* Good observing that the bird's nest on the science table is made of small sticks or twigs that are *solid.* You are right, Jeremy! The coats and caps hanging by the door are also *solid.*

Today, in our new book, we will listen for three words: *liquid, frozen,* and *solid.* This week, we are learning about water and what water can do. We will learn that water is a *liquid* that can freeze and become a *solid.*

After previewing the three science-related words (i.e., *liquid, frozen,* and *solid*) and connected concepts (e.g., "Water is a liquid that can freeze and harden into a solid when the temperature is cold") before reading the book, Ms. Thomas is ready to read *Amazing Water.* While reading this informational text, she stops on specific pages to point to a picture and talk about the target word and connected science concepts that are depicted in the book. This teaching strategy ensures multiple opportunities to extend knowledge while expanding children's language abilities in the context of a book discussion.

Instructional Science Vignette: What Can Water Do?

Discussion While Reading *Amazing Water*

Ms. Thomas: The title of our new book is *Amazing Water.* Melvin Berger is the author who wrote the book, and Robyn Lash is the photographer who took the pictures. As I read, you will listen to learn about water and our magic words: *liquid, frozen,* and *solid.*

[She reads the first few pages of the book and stops to point to a picture of children swimming and children standing in the rain.]

⭐ **TEACHING STRATEGY:** Stop and briefly talk about vocabulary within the context of the book using book pictures to scaffold instruction.

Ms. Thomas:	This is a liquid. A liquid is something wet, such as water or juice. What is this, everyone?
Children:	A liquid!
Ms. Thomas:	Yes, here we see children playing in a pool. What liquid is inside the pool?
Child:	I see blue water.
Ms. Thomas:	Okay, the liquid water does look blue. What are the children doing in the liquid water in the swimming pool? *[There is a brief discussion. Then Ms. Thomas continues to read about water being a liquid that can change its shape. She reads that an iceberg is frozen water that may be found in the sea. She stops and points to the picture of the iceberg and engages children in a discussion about* frozen *water. She reads about ice being a* solid *and points again to the iceberg when explaining that ice is a solid.]*
Ms. Thomas:	Yes, here is a big piece of ice, an iceberg, and it is solid. Remember, a solid is something hard, such as wood or rocks.

⭐ **TEACHING STRATEGY:** Make brief connections to life experiences using vocabulary.

Ms. Thomas:	How do you think this solid ice would feel if you touched it with your fingers?
Child:	Cold!
Child:	Hard.
Ms. Thomas:	I think that you are all right. If we touched this iceberg, it would feel cold because it is frozen water, and it would feel hard because it is a solid! *[She continues to read the book.]*

In these brief verbal exchanges before and while reading the text, Ms. Thomas makes it a daily routine to interject "knowledge-rich" (Hirsch, 2006, p. 6) science or social studies content into the book-reading discussions to expand children's life experiences—that is, Ms. Thomas explicitly engages children in an interactive discussion around three science concepts to boost children's content vocabulary and conceptual knowledge.

PROJECT WORDS OF ORAL READING AND LANGUAGE DEVELOPMENT

In Project WORLD (Gonzalez, Simmons, Pollard-Durodola, & Kwok), preschool teachers like Ms. Thomas moved beyond teaching content vocabulary words in isolation and learned to be responsive to opportunities to build *networks of knowledge* (Nagy, 2005; e.g., "Water is a *liquid* that can *freeze* and harden into a *solid* when the temperature is cold. Both *frozen* and *liquid* water are crucial to our daily lives.") that can accelerate both vocabulary and content learning. By infusing content vocabulary instruction within the context of daily shared book-reading lessons, teachers progressively developed networks of words and

connected knowledge with 197 preschool children from high-poverty backgrounds. The purpose of Project WORLD was to design and evaluate an early curricular intervention that accelerates the oral language abilities (e.g., vocabulary) and conceptual knowledge of children at risk for underachievement and comprehension difficulties due to limited life experiences and socioeconomic resources. The goal in writing this text, therefore, is to bridge research to practice by providing suggestions and examples of how early childhood educators can intensify their shared book-reading practices, as Ms. Thomas has done, to accelerate content vocabulary knowledge and learning in young children.

Building a Foundation for Comprehension

The development of concept knowledge and related content-based word meanings is an important part of language and text comprehension (Hirsch, 2006; Verhoeven & Perfetti, 2011). Because word meanings do not exist in isolation, learning vocabulary is connected to acquiring sufficient world knowledge to be able to talk about broad experiences (Scarcella, 2003). Thus content vocabulary must be taught within the context of building extensive knowledge networks (Anderson & Freebody, 1981; Nagy, 2005; Neuman, 2006). Building a strong oral language foundation is specifically important to text comprehension because vocabulary is the true "carrier of meaning" (Verhoeven & Perfetti, 2011, p. 2).

The Social and Economic Context

In a longitudinal study (2 ½ years) of 42 families that varied by socioeconomic status (SES; i.e., high-poverty, working-class, and professional backgrounds), Hart and Risley (1995) observed that families' language patterns varied considerably. Researchers noted that parents from higher socioeconomic backgrounds provided richer adult–child conversations in the home by talking more to their children and exposing them to both sophisticated words and connected world concepts. Thus children's oral language abilities at age 3 were found to be related to their life experiences and also were predictive of future academic success or failure. Based on these findings, Hart and Risley advocated for home- and school-based intervention approaches that would "equalize early experience" (p. 191) for children from high-poverty settings by addressing their oral language and conceptual knowledge needs early.

Beyond this study, there is further evidence that children's language abilities and conceptual knowledge are related to their life experiences. Children's experiences often are dictated by the family's SES and parenting practices, which have an impact on the quality and frequency of adult–child conversations in the home (Dickinson, 2011; Farkas & Beron, 2004; Lareau, 2003). For example, living in poverty may limit children's access to high-quality early child care, stimulating educational resources, varied print materials (e.g., books, newspapers) in the home, and other resources that parents use to support the development of oral language (e.g., vocabulary) and world

knowledge in their children (Neuman, 2006; Neuman & Celano, 2001). Poverty also may affect parents' ability to interact with young children during periods of economic hardship (McLoyd, 1990) and may prevent children from being exposed to important "informal informational lessons" (Neuman, 2006, p. 25) in which knowledge about the world is transmitted during adult–child interactions. In contrast, children who enter school from families with higher socioeconomic resources demonstrate stronger language abilities (Barbarin et al., 2006; Lareau, 2003). These children may be accustomed to adult–child conversations that use more elaborate and analytical discourse with extensive discussions about the world (Lareau, 2003).

Limited home resources, life experiences, and adult–child verbal interactions ultimately may negatively affect children's acquisition of conceptual knowledge and comprehension skills (Biemiller, 2003; Hirsch, 2003) and hence their ability to benefit from academic learning, even through high school (NICHD Early Child Care Research Network, 2005). Equally important, these differences in children's initial abilities generate a "social stratification of knowledge" (Neuman, 2006, p. 32) that is initiated at home and perpetuated in school settings in which teachers of young children often have little guidance in how to accelerate oral language and vocabulary learning (Neuman & Dwyer, 2009; Neuman & Roskos, 2005). Yet research suggests that robust vocabulary instruction must begin early (e.g., preschool) when the highest rate of vocabulary growth occurs (Farkas & Beron, 2004; National Early Literacy Panel [NELP], 2009).

Accelerating Oral Language and Vocabulary

Oral language development during preschool contributes strongly to a child's reading ability (NELP, 2009; Snow, Burns, & Griffin, 1998), including semantic (i.e., word knowledge and expressive and receptive vocabulary), syntactic (i.e., knowledge of grammar rules and word order), and conceptual knowledge (i.e., world knowledge and domain knowledge; Storch & Whitehurst, 2002). Oral vocabulary, a critical component of oral language, specifically appears to play a decisive role in the development of young children's ability to read (Adams, 1990; Biemiller, 2003; National Reading Panel [NRP], 2000; Scarborough, 2001; Storch & Whitehurst, 2002) and is important for building domain knowledge (e.g., science, social studies) and academic learning (Hirsch, 2003). Overall, the preschool years represent an important window for developing children's oral language and vocabulary.

Growth in specialized vocabulary is crucial for the development of *domain knowledge,* or content learning, which accelerates both listening and reading comprehension (Hirsch, 2003). Given that oral vocabulary acquisition is stimulated through interactions with adults and other children, closing the gap between children with sufficient vocabulary and conceptual knowledge and those with limited knowledge and life experiences is dependent on teachers' abilities to provide effective instructional practices that emphasize multiple,

extended exposures (Coyne, McCoach, & Kapp, 2007) to specialized vocabulary associated with academic content domains (Stahl, 2003; Walsh, 2003).

In the opening vignette, Ms. Thomas's goal was to extend children's oral vocabulary abilities through explicitly teaching content-related (science) vocabulary concepts in the context of talking about books and connected life experiences. Ms. Thomas's preschool children benefit from an instructional method that organizes large amounts of content vocabulary and information into meaningful networks with plentiful opportunities for repeated practice and extended learning (Neuman, 2006; Neuman & Dwyer, 2009). This instructional method takes place during Ms. Thomas's daily 20-minute shared book-reading lesson.

HOW WE READ BOOKS MATTERS

Shared book reading can occur in whole-class or small-group instruction and has been studied for the past 25 years in Head Start or subsidized child care settings established to meet the language, literacy, and cognitive needs of children from low-income backgrounds (Blok, 1999; Ezell & Justice, 2005; Hargrave & Sénéchal, 2000; Scarborough & Dobrich, 1994; Spycher, 2009; Wasik & Bond, 2001; Wasik, Bond, & Hindman, 2006; Whitehurst & Lonigan, 1998). In more recent years, investigators have sought to understand how specific strategies can be embedded in the book-reading process to promote children's early language and literacy abilities via prereading instruction, comprehension skills, and word meaning discussions (Diamond, Justice, Siegler, & Snyder, 2013).

Collectively, eight research syntheses (Blok, 1999; Mol & Bus, 2011; Mol, Bus, & de Jong, 2009; Mol, Bus, de Jong, & Smeets, 2008; NELP, 2009; Scarborough & Dobrich, 1994; Swanson et al., 2011; WWC, 2006) and four observational investigations (Dickinson & Keebler, 1989; Dickinson & Smith, 1994; Wasik & Bond, 2001; Wasik et al., 2006) have examined the effectiveness of reading books in terms of children's vocabulary outcomes. The value of word-learning activities around shared book reading is also underscored by correlational and experimental research showing a strong relationship between vocabulary and reading comprehension (Elleman, Lindo, Morphy, & Compton, 2009). Together, these school-based shared book-reading studies allude to a book-reading style and structure that depend on the expertise of a responsive adult and his or her ability to create a cycle of rich dialogue and feedback that is important for vocabulary acceleration and oral language expansion. Specifically, the efficacy of shared book reading is influenced by the way children are read to and the adult–child interactions that occur around and beyond the actual book-reading event (Reese, Cox, Harte, & McAnally, 2003).

Evidence suggests that an interactive book-reading style, in which an adult integrates open-ended questions in a cycle of feedback and confirmation, is necessary for accelerating vocabulary learning in children with limited language and literacy experiences (Arnold & Whitehurst, 1994; Hart & Risley, 1995; Huttenlocher, Vasilyeva, Cymermann, & Levine, 2002; NELP, 2009; Wasik

et al., 2006). Interactive book-reading methods allow children to learn about their world through strategic and active engagement via telling and discussing a story and its characters, events, and vocabulary (Ezell & Justice, 2005). For example, *dialogic reading* is a method of interactive book reading that includes structured scaffolds (e.g., oral repetitions, expansions, modeling of grammatical structures) and feedback that extend children's oral responses via open-ended questions about a book or book pictures (Lonigan, Shanahan, & Cunningham, 2008). Dialogic reading was first studied in 1988 and has been associated with growth in children's expressive language abilities (Whitehurst et al., 1988). In a dialogic book-reading approach, an adult extends children's oral language abilities by progressively talking less so that children can increasingly talk more (Flynn, 2011).

Within the last 10 years, researchers have investigated the benefits of interactive book-reading interventions that integrated vocabulary instruction within the context of learning about science (French, 2004; Leung, 2008; Neuman & Dwyer, 2011). In these interactive content-based shared book-reading studies, science-related words (e.g., *prism*, *frequency*) and concepts were taught with informational text-reading content sometimes organized around themes (e.g., light, growth/change, healthy habits, living things) guided by appropriate science standards (e.g., Benchmarks for Science Literacy). Young children significantly grew in the acquisition of complex science vocabulary (e.g., *opaque*, *transparent*) and experienced higher gains on standardized vocabulary measures. In a third study, World of Words (WOW; Neuman & Dwyer, 2011), based on a multimedia approach (e.g., content-related videos, picture cards, take-home books) with content-related book discussions, low-income preschool children benefited from instruction on word taxonomies (classifying words into categories) to facilitate retention of difficult words.

Although these studies emphasize the importance of content learning for vocabulary building, they also yield two important insights related to intensifying vocabulary instruction for young children from low-income settings. First, results from these studies confirm that "many of the academic and linguistic delays shown by children from low-income families derive from the lack of broad-based experiences and that these experiences can be recreated using a content-focused preschool curriculum" (French, 2004, p. 148). Second, results from these investigations suggest that more effective vocabulary interventions emphasize the structure of knowledge with explicit opportunities for children to "integrate knowledge into larger categories and concepts" (Neuman, 2010, p. 302).

The key to all models of interactive shared book reading lies, therefore, in the instructional expertise of an adult who is able to push children's conversational abilities beyond what they can independently accomplish and, in the process, expand children's knowledge about words and the world. In the earlier vignette, Ms. Thomas extended children's conceptual knowledge (e.g., "Water is

a *liquid*. . . . Besides water, there are many other types of *liquids*.") while modeling more complex sentence structures (e.g., in response to the child's response, "The table," Ms. Thomas said, "Yes, the wooden table and the wooden chairs are also *solids*."). This instructional approach during shared book reading generates adult–child informational conversations that allow children to say something about a specific topic (e.g., science—the nature of water) and allow the teacher to respond in a way that continues the dialogue while attending to vocabulary usage and knowledge (Hart & Risley, 1995).

As illustrated in the instructional vignettes throughout this book, there are two significant benefits of interactive book reading (Cabell, Justice, Vukelich, Buell, & Han, 2008). First, interactive reading provides a context for *scaffolding* children's language skills. In the scaffolding process, an adult listens to oral responses in book conversations; determines if children have learned the taught concepts or have sufficient background knowledge; and, in response to children's understanding, extends children's language and learning in a discussion. Second, interactive book reading moves children from being passive listeners to being active learners (e.g., asking questions, pointing to pictures, providing additional information, talking about life experiences)—a condition that is conducive to high vocabulary growth (Sénéchal, Thomas, & Monker, 1995).

For example, in the prior instructional vignette (before reading the text *Amazing Water*), Ms. Thomas understands that some children are not able to respond to her open-ended question, "What do you see in this room that is *solid*?" Children may remain silent because they may require additional clarification to understand the science concept, *solid*, or they may not understand how to clearly express their thoughts. Ms. Thomas thinks quickly on her feet and scaffolds instruction using the following strategies:

1. She provides an additional explanation of the concept:

    "They (rocks on the science table) are *solid* because they feel hard when you touch them."

2. She provides additional examples of *solids* that can be found in the classroom:

    "I see maps on the walls that are *solid*, and I see lights on the ceiling that are a *solid*. If I touched them, they would feel hard. What else in the room is a *solid*?"

3. She models appropriate language use and more complex sentence structures when the children require assistance in expressing their thoughts more completely:

    "Yes, the wooden table and the wooden chairs are also *solids*. Good observing that the bird's nest on the science table is made of small sticks that are *solid*."

In addition to scaffolding instruction, Ms. Thomas provides opportunities for *active learning* by encouraging children to point to pictures representing vocabulary and connected concepts, expand on their oral explanations,

and talk about related life experiences. In sum, by scaffolding instruction and encouraging active student learning, this teacher is providing a foundation for cognitive growth.

EFFECTIVE BOOK-READING PRACTICES

Mounting evidence shows that children from low-income settings require vocabulary instruction that is able to close both early word and knowledge gaps; however, research indicates that typical shared book-reading practices may not be intensive enough to support children's language development (Marulis & Neuman, 2011, 2013; Mol et al., 2009; Penno, Wilkinson, & Moore, 2002), especially if children enter school with limited word and world knowledge. For example, results from a synthesis of 31 shared book-reading studies indicated that the strongest effects for shared book reading occurred in interventions that were implemented not by teachers but by nonpractitioners (e.g., researchers; Mol et al., 2009). In a second investigation, Penno and colleagues (2002) concluded that although listening to and talking about books with repeated story readings and target word explanations are beneficial for young children, more intensive strategies are required for children with low language abilities. In addition, evidence suggests that young children and teachers typically spend little time engaged in conversations (Dickinson & Tabors, 2001). Interactive shared book-reading practices that allow children to respond to and discuss important connections between words and concepts are crucial.

In general, findings from the past 25 years of shared book-reading research indicate that effective book-reading practices can have a significant impact on the school readiness of children from low-income families (Zevenbergen & Whitehurst, 2003). This is especially the case when the following scientifically tested book-reading practices and structure are integrated into the shared book-reading process:

- *Multiple text genres* (i.e., narrative and informational text) provide frequent exposure to words, connected concepts, and prior knowledge to boost comprehension (Duke, 2000; Duke, Bennett-Armistead, & Roberts, 2003).

- *Repeated reading* of stories allows children to ask more questions and talk more about book-related content as they listen to a text multiple times (Justice, Meier, & Wadpole, 2005; McGee & Schickedanz, 2007).

- *Explicit teaching of high-utility vocabulary words* prior to reading the book and/or during the book-reading process exposes children to words that are important for later learning and text reading (Beck, McKeown, & Kucan, 2002; de Temple & Snow, 2003; Justice et al., 2005). Explicit teaching may include open-ended questioning, pointing to book pictures that depict words, and repeating words used in sentences (Sénéchal, 1997).

- *"Before" and "after" shared reading conversations with brief in-context definitions* allow instruction and talking points to be distributed so that new

information can be taught in the context of the storybook or informational text (Reese et al., 2003; Wasik et al., 2006).

- *Multiple exposures to vocabulary and connected concepts* allow children to learn words incrementally and cumulatively so that information accumulates over time (Dickinson & Smith, 1994; Stahl, 1991). Multiple exposures can occur during and beyond book discussions.

- *High cognitive* instruction requires children to use complex thinking skills (e.g., explaining, summarizing, associating, connecting, synthesizing, analyzing) to deeply process vocabulary (Dickinson & Smith, 1994). Participation in higher level discussions improves oral language abilities and increases vocabulary depth as children make connections between words and factual knowledge (van Kleeck, 2008).

- *Priming background knowledge* is a brief scaffolding exercise in which the learner, through the guidance of a teacher, retrieves information drawn from personal experiences to better understand new knowledge (Baker, Simmons, & Kame'enui, 1998; Simmons et al., 2008). Priming background knowledge facilitates comprehension and broadens children's world knowledge (Simmons et al., 2008).

When used in tandem, these evidence-based instructional practices yield a type of "extended vocabulary instruction [which] is characterized by explicit teaching that includes both contextual and definitional information, multiple exposures to target words in varied contexts, and experiences that promote deep processing of word meanings" (Coyne et al., 2007, p. 74). These practices form the foundation for Project WORLD's shared book-reading approach that is highlighted in this text.

READING BOOKS TO CHILDREN FROM DIVERSE LINGUISTIC BACKGROUNDS

The majority of interactive shared book-reading investigations have been conducted with children who were native English speakers, with fewer preschool center-based studies including children who speak another language at home (Cohen, Kramer-Vida, & Frye, 2012a; Collins, 2010; Roberts & Neal, 2004; Shanahan & Beck, 2006; Silverman, 2007; Spycher, 2009). Although we know much about effective instructional book-reading practices for native English speakers, we have less guidance from research on how interactive shared book reading might be used to accelerate the vocabulary and conceptual knowledge of children acquiring early language and literacy instruction in English as a second language and/or in another language, such as Spanish.

We focus on Spanish language and literacy instruction in this text because approximately 79% of English language learners (ELLs) in the United States are from Spanish-language backgrounds (Ballantyne, Sanderman, & Levy, 2008). In addition, evidence suggests that attendance in high-quality preschool instruction has a greater effect on reducing the achievement gap for Latino students than for any other ethnic group (National Clearinghouse for English

Language Acquisition, 2011); however, we acknowledge that intensified shared book-reading practices also may be a starting point for equalizing the language experiences for a range of students from diverse linguistic backgrounds, who are speakers of other languages or nonstandard English (e.g., African American vernacular; Foorman, Seals, Anthony, & Pollard-Durodola, 2003) and are acquiring English at school.

Findings of existing shared book-reading research have indicated that young language learners benefited from explicit interactive book-reading instruction when acquiring English vocabulary, regardless of initial English oral language proficiency (Roberts & Neal, 2004). ELLs grew in vocabulary knowledge whether they were read to in English or another language (e.g., Spanish, Portuguese; Cohen et al., 2012a; Collins, 2010). One study, which intentionally integrated interactive book-reading behaviors while building content-specific (science) academic knowledge, noted that young children from diverse linguistic backgrounds (e.g., Spanish, English, bilingual) grew in their vocabulary outcomes (Spycher, 2009). Findings from these investigations indicate that reading books to ELLs may be a promising practice; however, the "quality of evidence" is limited due to an insufficient number of studies (Shanahan & Beck, 2006).

The following scientifically based shared book-reading practices seem promising for young preschool ELLs:

- Repeated readings of texts, which is important for ELLs acquiring English as a second language (Espinosa, 2010; McGee & Schickedanz, 2007)

- Book-reading content that is organized by content themes (e.g., science; Spycher, 2009)

- Explicit instruction on specific target word use (Cohen et al., 2012a; Roberts & Neal, 2004)

- Strategic use of visuals (e.g., pictures of target words, book illustrations; Cohen et al., 2012a)

- Opportunities to use language for academic discussions (Spycher, 2009)

Note that some practices overlap with those that have been implemented in studies with native English speakers. The instructional implication is that, in general, these strategies may benefit all young learners who require explicit and multiple exposures to vocabulary concepts via interactive academic discussions.

Beyond the shared book-reading literature, vocabulary research summarized by the seminal review *Developing Literacy in Second-Language Learners: A Report on the National Literacy Panel on Language-Minority Children and Youth* (NLP; August & Shanahan, 2006) provides guidance on instructional practices that are associated with higher student vocabulary outcomes. After examining studies of ELLs (ages 3–18) acquiring English as a societal language, the NLP (August & Shanahan, 2006) found a positive benefit for explicit instruction of 1) native and/or second oral language skill development to build complex vocabulary for higher order cognitive tasks (Anderson & Roit, 1998) in addition to 2) elaborated word meanings illustrated with visuals (Vaughn-Shavuo,

1990). The latter strategy—the strategic use of visuals—is especially appropriate for instructing children from diverse linguistic backgrounds (Gersten & Baker, 2000; Wallace, 2007). Findings from intervention research also suggest that young ELLs benefit from early language and literacy interventions that boost vocabulary and maximize student-focused talk (Saunders & Goldenberg, 1999) first and also maximize opportunities for building concepts in the context of expository and traditional narrative texts (Vaughn, Linan-Thompson, Pollard-Durodola, Mathes, & Cárdenas-Hagan, 2005).

In our research, we have used the WORLD content-related shared book-reading approach in bilingual settings to accelerate English or native Spanish content vocabulary acquisition (Pollard-Durodola, et al., 2012) in Spanish-speaking preschoolers. In these ELL studies, children were able to learn content vocabulary and concepts that were explicitly taught using the shared book-reading approach initially implemented with monolingual English-speaking children; however, preschool teachers of ELLs were taught to use additional oral language scaffolds to address the range of English language abilities when book reading was conducted in English. There is mounting evidence of the significant role of oral language in the literacy development of young ELLs.

Overall, instruction that supports and builds native language acquisition for ELLs provides an important foundation for second-language vocabulary learning (August & Shanahan, 2006; Cummins, 1979). Research specifically suggests that ELLs who enter preschool with significant vocabulary gaps may require high-quality vocabulary instruction in their primary language without affecting future English language and literacy development (Durán, Roseth, & Hoffman, 2010). This "additive approach" to language learning promotes reading and discussing books in children's native language while promoting second-language acquisition (National Association for the Education of Young Children [NAEYC], 2009). Instructional practices (e.g., shared book reading) that develop native language and/or second oral language abilities should prioritize the explicit teaching of word meanings (August & Shanahan, 2006; Gutiérrez, Zepeda, & Castro, 2010; Silverman, 2007). In summary, the WORLD book-reading approach can be used when providing native and/or second-language content vocabulary instruction.

A FRAMEWORK FOR INTENSIFYING SHARED BOOK READING INSTRUCTION

Knowledge Connections

Instructional Science Vignette: What Can Water Do?

Discussion After Reading *Amazing Water*

Ms. Thomas: Let's think hard. What is the *difference* between a *solid* and a *liquid? [Children are silent.]*

Ms. Thomas:	Okay, let's look at this picture of a *liquid*. How would this *liquid* feel?
Children:	It would feel wet!
Ms. Thomas:	Great thinking! A *liquid* would feel wet. Now let's look at this picture of a *solid*. How does this *solid* feel?
Child:	It feels hard!
Ms. Thomas:	Yes, the bricks in this picture are *solids*, and they feel hard just like this wooden floor that we are sitting on. So something that is a *solid* usually feels hard, and it also has a shape; however, a *liquid* feels wet, and it does not have a shape. Look at the picture here *[pointing to a picture of a glass of water in the book]* of this *liquid* water. *Liquids* and *solids* feel *different*. Water can be a *liquid*, but when it becomes cold, it freezes and becomes a *solid* like the *frozen* ice cube in this picture. The difference between a *solid* and a *liquid* is that a *solid* is hard and a *liquid* is wet.

How can we design instruction to teach content words such as *solid, liquid,* and *frozen* to young children in ways that are effective and accelerate academic learning? We can begin by examining the *knowledge hypothesis*: a theory that suggests that children accrue vocabulary knowledge by understanding relationships between new words and their connected concepts (Anderson & Freebody, 1981; Nagy, 2005). For example, it would be difficult to understand the words *solid* and *liquid* without knowing something about what water can do. It would be equally difficult to understand the words *branch, twig,* and *woods* without knowing something about trees. Knowing a word's meaning, then, implies that one understands the "network of concepts" connected with the word (Stahl & Nagy, 2006). Because vocabulary knowledge is built on sets of word relationships or associations (Nagy, 1988), the development of content vocabulary is dependent on knowledge that is embedded in language (McKeown & Curtis, 1987).

Nagy, in his classic *Teaching Vocabulary to Improve Reading Comprehension,* refers to this conceptual framework of intensive vocabulary instruction as "integration" (1988, p. 10), emphasizing that children should learn "new words not as words but as new concepts" (p. 21). This approach, in turn, derives from *schema theory,* according to which knowledge consists of relationships and not independent facts. As a result, new information can be learned by relating it to what we already know (Nagy, 1988).

These units of relationships or networks affect comprehension (Stahl & Nagy, 2006). Therefore, more effective vocabulary instruction should 1) help young children understand relationships between new vocabulary and connected concepts while 2) deepening their knowledge of the world (McCardle, Chhabra, & Kapinus, 2008).

The instructional implication in interactive shared book reading is that the educator must make explicit connections between taught words from the text

and concepts embedded in children's background knowledge. By constructing networks of knowledge via high-priority content themes (e.g., earth), topics (e.g., land, water), and related words (e.g., *shore, river, island, meadow, valley, mountain*), teachers can assist children in understanding relationships between words and concepts while building their background knowledge (e.g., "The earth is made of land and water"). This pedagogical approach provides a foundation for listening comprehension in the early years and text comprehension beyond preschool.

Knowledge Acceleration

In addition, it is important to develop a book-reading style and structure that allows children to learn more (e.g., information, words, prior knowledge) in less time (Becker, 1992). For example, in the *Model of School Learning*, Carroll (1963) hypothesized that learning is a function of the time spent learning divided by the time needed to learn. For learners with significant oral language needs, the time needed to learn may exceed the time that is generally available. Quality instruction can actually reduce the amount of time needed, thereby increasing the probability of learning. We advocate that interactive book-reading time be enhanced and learning accelerated by designing high-quality instruction that focuses on the following three dimensions:

1. *Instructional dimension:* explicitly taught priority skills (e.g., deep processing of vocabulary knowledge by summarizing similarities and differences between concepts)

   Instructional example: Ms. Thomas: *[Holding a picture of a waterfall and a picture of a swimming pool.]* These are both examples of *liquids.* Now I'll tell you what is the same about the *liquid*s in these pictures. They are both wet. Now you tell me what is the same about the *liquid*s in these pictures. Now tell me what is different about the *liquid*s in these pictures.

2. *Instructional dimension:* clearly communicated information

   Instructional example: Ms. Thomas: This is *frozen.* You know something is *frozen* if it feels cold and hard when you touch it.

3. *Instructional dimension:* strategic scaffolds for difficult tasks

   Instructional example: Ms. Thomas: What is the difference between something that is *frozen* and a *liquid?* Look at this picture of a glass of orange juice. If something is a *liquid,* it is wet, such as water. Now look at this picture of the hand holding the ice cube. If something is *frozen,* it is hard and cold. The difference between something that is *frozen* and a *liquid* is that if something is *frozen,* it is hard and cold, and if something is a *liquid,* it is wet, like water.

These dimensions of instruction are fundamental for children who enter school from high-poverty settings and have much to learn in a limited period of time (Simmons et al., 2008).

Three Principles of Instructional Design

Based on what we know about designing a quality of instruction that can increase the probability of learning while developing networks of concepts within a limited amount of time (e.g., a typical school day), we propose three principles of instructional design. These principles should guide content-based instruction to accelerate science and social studies concepts and vocabulary via an interactive book-reading process that incorporates recommended practices from shared book-reading and vocabulary research:

- *Align vocabulary instruction with content standards and objectives.*
- *Create multiple exposures to words and connected concepts via content-related themes.*
- *Develop opportunities to dialogue about word and world connections.*

These guiding principles formed the basis for designing the WORLD preschool shared book-reading intervention and were used to organize book-reading content, intensify vocabulary instruction, and accelerate meaning-based skills such as oral language, content-related vocabulary, and world knowledge.

Unlike the majority of prior shared book-reading studies, ours approached lexical sets of related vocabulary using books as one context for introducing words. Lexical sets focus children's attention on vocabulary–concept connections before, during, and after reading texts. This instructional approach encouraged a deep understanding of relationships across words while discussing relevant life experiences.

SUGGESTED FURTHER READINGS

Ezell, H.K., & Justice, L.M. (2005). *Shared storybook reading: Building young children's language and emergent literacy skills.* Baltimore, MD: Paul H. Brookes Publishing Co.

Hirsch, E.D. (2006). Building knowledge: The case for bringing content into the language arts block and for knowledge-rich curriculum core for all children. *American Educator, 30*(1), 8–18.

Neuman, S.B. (2006). The knowledge gap: Implications for early education. In S.B. Neuman, & D. K. Dickinson (Eds.), *Handbook of early literacy research* (pp. 29–40). New York, NY: Guilford Press.