CHAPTER 9

Promoting Lower- and Higher-Level Language Skills in Early Education Classrooms

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Learning the complexities of language is one of the most important and observable achievements of early childhood. A multidimensional aspect of children's development, language comprises a set of rule-governed, basic developmental processes (or domains) that begin to emerge at the time of birth (if not before), then rapidly develop over the next 6 years (see Pence & Justice, 2007). Children's language skills during early childhood are closely related to a number of other developmental domains, including social competence (Fujiki, Brinton, Isaacson, & Summers, 2001), literacy development (National Institute of Child Health and Human Development [NICHD] Early Child Care Research Network, 2005; Scarborough, 1990), and self-regulation (Fujiki, Brinton, & Clarke, 2002). An individual's language skills provide the means for efficient communication with others and therefore, across the entire lifespan, provide the mechanism for meeting very basic communicative needs (e.g., to request, to reject), and for engaging in a range of daily living contexts, including home, school, and community.

For a majority of children the development of language occurs rapidly and in a predictable sequence. However, there are a variety of known risk factors, both environmental and genetic, that have the potential to alter and slow this natural developmental course, thereby affecting not only the pace of language acquisition but also other aspects of development closely linked to language (e.g., Justice, Bowles, Pence Turnbull, & Skibbe, 2009). For instance, children who receive relatively little linguistic input, due to either a physical disability (e.g., significant hearing loss) or understimulating caregiving environments, may experience significant lags in their language development compared to other children. This can lead to lags in development of other skills, such as social competence and prereading abilities. Nonetheless, researchers have identified a number of important ways in which early lags in language development can be prevented or mitigated, including implementation of interventions within early education classrooms.

This chapter is organized to describe language skills warranting special attention within early education settings that are known to be malleable through intervention. In the first section, we describe various domains of language and identify the difference between lower- and higher-level language skills. We also examine how specific language skills contribute to social and academic success. In the second section we discuss different approaches for teaching higher- and lower-level language skills, and describe a possible scope and sequence of instruction that may be utilized in early education settings.

Domains of Language

Historical Conceptualizations

Three decades ago Bloom and Lahey's (1978) conceptualization of language as a three-domain system provided a parsimonious approach to describing children's early developments in language. Bloom and Lahey described language as comprising three interrelated domains; within each, children must internalize specific rules: form, content, and use. *Form* includes the "building blocks" of language: phonology, morphology, and syntax. *Phonology* involves the rules governing sound structure, *morphology* involves the rules governing word constructions, and *syntax* involves the rules governing sentence constructions. *Content* can be conceptualized as the rules governing vocabulary words and their associated meanings, and is synonymous with the term *semantics*. *Use*, also referred to as *pragmatics*, refers to rules governing the communicative intent of language. Knowledge of the differences among these three domains of language, as well as their interrelations, allows one to describe more fully the course of language acquisition and identify more precisely areas of language in which a given child may exhibit a developmental weakness or impairment.

Form: Phonology, Morphology, and Syntax

Phonology refers to the rules governing sound structure, specifically the use of individual sounds within languages. These individual sounds are called *phonemes* and are the smallest unit of contrastive meaning in language. An example of a phoneme is the sound /b/ that one hears in the beginning of the word *bit*. Note that changing the initial phoneme of this word from /b/ to /p/ changes the meaning of the word entirely, despite the fact that the two words (*bit, pit*) are produced almost identically.

Standard American English has approximately 39 phonemes; of these, 15 are vowels and 24 are consonants. It is important to note that the sounds of a spoken language are not equivalent to the letters (or *graphemes*) in an alphabetically based written language, such as English or Spanish. Alphabet letters do correspond to specific sound(s) (e.g., the sound /f/ corresponds to the letter *f*), but not all alphabet letters are restricted to one associated phoneme. For example, in English, the letter *c* is associated with two phonemes in English: the /k/ sound heard in the beginning of the word *cat* as well as the /s/ sound heard in the beginning of the word *circle*. The use of letters to represent individual speech sounds (*written language*) emerged long after humans began to use speech sounds to represent their internal thoughts to others (*oral language*).

Phonological awareness, a familiar term to many educators, refers to one's ability to attend to and manipulate phonemes in oral language and can be measured by asking children to complete tasks such as rhyming or identifying the initial sound in a spoken word. Knowing the correspondences between letters and sounds is referred to as *letter–sound knowledge* and, while it relies on one's phonological awareness, it is a different developmental construct. For instance, a child may exhibit phonological awareness but have little

knowledge of letter–sound correspondences. Many early educators are interested in supporting children's development of phonological awareness and letter–sound knowledge, given that these are important foundations of beginning reading skill (Calfee, Lindamood, & Lindamood, 1973; Catts, Fey, Zhang, & Tomblin, 2001; Torgesen, Wagner, & Rashotte, 1994); therefore, it is important to recognize the distinctiveness of closely related terms such as *phonology*, *phonological awareness*, and *letter–sound knowledge*, so that each is attended to instructionally in early education settings.

Grammar, a language domain often highlighted in child development literature, particularly as it relates to children with language disorders, is an umbrella term encompassing both morphology and syntax. Both components are part of an overarching set of rules that define how words, or parts of words, are combined in ways that conform to the rules of a particular language. It is regrettable that so many adults dislike discussing grammar (at least from our experience as university faculty who have taught courses in language development) because grammar is a very important aspect of children's language growth that has strong linkages with other aspects of language (e.g., vocabulary; see Dixon & Marchman, 2007), as well as later reading achievement (Adlof, Catts, & Lee, 2010; Muter, Hulme, Snowling, & Stevenson, 2004). Although grammar is considered a relatively resilient aspect of language development, grammar deficits are a hallmark of childhood language disorders (which affect about 7–10% of young children; see Tomblin et al., 1997). It is important for early educators to understand grammar—comprising both morphology and syntax—so that they can provide instruction in their classrooms to stimulate this particular aspect of language development.

Morphology is the rules that govern the structure of words. A *morpheme* is a basic unit of meaning and can be a stand-alone word (e.g., *boy*) or a prefix or suffix that adds meaning (e.g., the *-s* in the word *boys* to mark plurality or the *-ing* in the word *walking* to mark the present progressive state of the verb). The former type of morpheme is called a *free morpheme*, and the latter is a *bound morpheme*. Bound morphemes include both derivational and inflectional morphemes. A *derivational morpheme* can be added to a word to devise another word, such as *pre-* added to the word *school* to form *preschool*. In this case, the morpheme provides information about the semantics, or meaning, of the word: by adding *pre-* to the word *school*, we know more about the particular type of school (i.e., it is a school for very young children). *Inflectional morphemes* are those that add grammatical meaning to a word; such morphemes include the plural *-s*, the possessive marker *-'s*, the past tense marker *-ed*, and the present progressive marker *-ing*. The ability to produce and comprehend morphemes in language is called *morphological awareness*. Good morphological awareness allows children to expand their vocabulary greatly by adding inflections onto known base words (e.g., *school, schooling, schooled, preschool*); additionally, the ability to use morphemes correctly allows children to express their ideas in a more precise manner. For example, when a child says "They walked" (vs. "They walk"), he or she is conveying important information about the timing of an event. The ability to communicate precisely is critical for using language to meet both social and academic needs.

Syntax refers to the rules that govern the internal organization of sentences; that is, syntactic rules dictate that words in a particular language must be in a prescribed order. A remarkable aspect of syntax is that a minimal number of rules allows one to combine words in an infinite number of correct sentences. Additionally, these rules provide listeners or readers important information related to the meaning of a sentence. Consider, for instance, the sentences "The boy kissed the girl" and "The boy was kissed by the girl." The two sentences include almost the same set of words, and the word order is similar. However, the meanings are very different, and it is implicit knowledge of active and passive sentences that allows one to discern the important distinction in meaning.

Content: Semantics

Learning to recognize or produce the label for objects is one of the most exciting language accomplishments of early childhood. The infant's first expression of a word, often the name of a salient caregiver (*Mama, Dada*), is typically cause for celebration. Semantics, or rules governing the content of language, involve the rules related to individual word meanings, as well as word combinations. Most children acquire knowledge of vocabulary words quickly, with relatively little effort, as adults around them label objects, actions, and attributes (Bloom, 2000). By the beginning of kindergarten children may know approximately 3,500 word meanings (Biemiller & Slonim, 2001).

Word knowledge includes literal meanings, such as the understanding that a "cat" is a furry, four-legged animal that is often a household pet. However, it is important for children to comprehend figurative meanings of word combinations as well. Take, for example, the phrase "zip it." The literal meaning of this involves moving a zipper on an article of clothing to achieve closure. However, it is imperative that an elementary school child also realizes that the figurative meaning is "quit talking." The ability to comprehend such figurative language is an important academic skill, especially as children begin to encounter figurative language in print and social contexts.

Use: Pragmatics

The use of language is often termed *pragmatics* and involves rules governing the social use of language. Pragmatics is often described as involving three major communicative skills: using language for different intentions; changing language according to the needs of a communication partner; and following rules for conversation, storytelling, and narration (American Speech–Language–Hearing Association, 2010). The latter skill emphasizes the importance of narration and is too often an underemphasized aspect of language development within early education settings. Narrative production and comprehension is the child's ability to express and understand language at the discourse level, whereby words and sentences are organized to form coherent sequences of events or ideas. Narrative ability is one of the most "ecologically valid ways in which to measure communicative competence" because narratives form the basis of many childhood speech acts (Botting, 2002, p. 1). Narratives typically follow a flexible but organized sequence; generally, stories share some common features, such as a setting, a plot, a conflict, and a resolution. The ability to generate and produce narratives begins in the preschool years and increases through the elementary school years; mastery of narratives is a critical language skill that is predictive of academic success, particularly as related to reading comprehension (Beck, Omanson, & McKeown, 1982).

Lower- and Higher-Level Language Skills

In the previous section we provided a general primer of the major domains of language, all of which are in an active state of development during the course of early childhood. For instance, with respect to the domain of phonology, enormous growth in phonology occurs between birth and age 5. Whereas at 6 months an infant is using only a few sounds to babble (typically /m/ and /b/), by 5 years the typical child is wholly intelligible and uses most, if not all, of the phonemes in his or her native language to produce an infinite number of words.

In general, we have largely focused on describing what might be called basic or "lower-level" language skills, so named because they emerge relatively quickly and easily for the

majority of children during the course of early childhood and form the foundation for a host of other "higher-level" skills. By about age 6 a child's form, content, and use of language represent automatized processes that occur very efficiently. For instance, a typical first grader is readily able to draw upon automatized phonological, lexical, and grammatical processes accurately to comprehend the sentence: "After we read this story together, we're going to make a list of all the adjectives that describe Arthur, so you really need to pay attention."

Higher-level language skills are layered upon lower-level language skills and are especially important when using language for complex purposes such as problem-solving, reasoning, and inferencing. Higher-level skills are particularly important for reading comprehension, especially the comprehension of more complex written materials. Theory and research demonstrate that, among mature readers, one's skills in reading comprehension approximate one's listening comprehension (Perfetti, 2007). Based on this "simple view" of reading, among the most critical determinants of listening comprehension are an individual's language skills, transcending both lower- (i.e., automatic) and higher-level (i.e., integrative) processes (Perfetti, 2007). Higher-order language skills are processes that are considered to be less automatic and instead play more of an integrative role in comprehension (Cain, Oakhill, & Bryant, 2004; Perfetti, 2007). Higher-level language skills that particularly influence skilled comprehension include *inferencing, comprehension monitoring*, and use of *text structure knowledge*, collectively and variously referred to as "higher-level meaning construction skills" and "higher-level factors in comprehension" (respectively, Cain et al., 2004; Perfetti, Landi, & Oakhill, 2005).

In simple terms, inferencing allows one to "fill in the gaps" in language. To understand written or spoken language readers need to be able to go beyond the literal meaning of words by linking main ideas from the text and using general knowledge to provide additional information that is not explicitly stated. The ability to make inferences relies heavily on possessing the appropriate schema, or background knowledge, to comprehend spoken or written text. An additional higher-order language skill, comprehension monitoring, involves the capacity to reflect on one's own comprehension, and in addition, the ability to detect incongruities within a text. It is important to note that a failure to notice problems or inconsistencies in text may stem from lack of general knowledge instead of a failure to monitor inconsistencies. Finally, knowledge of text structure is considered another higher-level language skill. Children need the ability to produce and comprehend both narrative and expository text to be successful readers. These three higher-order skills involve the integration of numerous language processes, and often children with language delays or disorders have limited abilities in these higher-level processes.

Both lower- and higher-order language skills are used to construct meaning of connected text. The automatic, lower-order language skills are used to construct the literal meanings of a text, referred to by some as the *textbase* (Kintsch & Kintsch, 2005). Theoretically, when lexical representations are well specified and coherently organized—that is, *verbally efficient* (Perfetti, 2007)—one is able to draw upon the higher-level language resources to engage in higher-level comprehension of text. This higher-level comprehension involves creating a mental model of the text that integrates the text with one's prior knowledge and organizes its multiple propositions into an integrated whole (Kintsch & Kintsch, 2005). Creation of a mental model of a text—a *situation model*—draws upon the higher-level language skills that are not resource-cheap, so to speak, but are particularly crucial to higher level comprehension because of the *integrative* role they play (Cain et al., 2004; Perfetti, 2007). Indeed, measures of each of these three higher-level language skills explain significant amounts of unique variance in 8- to 11-year-old children's reading comprehension, even when controlling for lower-level language skills and other factors such as working memory and word-reading abilities (Cain et al., 2004).

Risk and Resilience in Early Language Development

One of the most widely-researched risk factors related to language development is familial socioeconomic status (SES), typically defined by family income level or maternal education. Early language development is rooted in the communication interactions that young children have with others, particularly their caregivers. In a seminal study Hart and Risley (1995) highlighted the importance of a child's home environment for providing language experiences to promote language development. They examined the home environment and language abilities of children from families of various SES levels. Children of families in the highest SES level heard approximately four times more vocabulary words than children in families with the lowest SES level. This difference in vocabulary was related to the children's language and cognitive skills at age 3 years and to expressive language at age 9 years, with the children from the lowest SES exhibiting, on average, the lowest language scores.

An additional risk factor associated with SES is the quality of early child care. Research has shown that quality teacher–child interactions, as well as the quantity and quality of teacher language use, can positively influence children's language development (Girolametto & Weitzman, 2002; Mashburn et al., 2008). For instance, children who are naturally exposed to more exemplars of complex syntax in their preschool classroom, such as that embedded within teachers' talk to students, have better grammar comprehension compared to children exposed to fewer exemplars of complex syntax (Huttenlocher, Vasilyeva, Cymerman, & Levine, 2002). Although these results are encouraging, many parents cannot afford to send their children to quality preschools; thus, their children miss quality interactions that serve to increase their language abilities. At the same time, parents may select preschools for their children on the basis of other factors, such as cost and convenience, rather than the quality of the interactions children experience.

Beyond SES, many types of developmental disability are accompanied by delays or disorders in language development, with several of the most common related to intellectual disabilities. Regulations for the Individuals with Disabilities Education Act (IDEA; 2004) define individuals with intellectual disabilities as those who score below 70 on an intelligence test and have accompanying "deficits in adaptive behavior" that "adversely affect a child's educational performance." Down syndrome, a genetic disorder associated with an extra chromosome 21, is one of the most common causes of intellectual disability. Down syndrome is associated with numerous behavioral features, but language is one of the most impaired domains of functioning and is the most prohibitive barrier to academic success and to inclusion by peers. Individuals with Down syndrome typically show decreased language performance across language domains, but have particular difficulty with language production and syntax (Roberts, Price, & Malkin, 2007).

Another disorder with associated language deficits is autism. Because manifestations of autism vary greatly among individuals, the disorder is often referred to as autism spectrum disorder (ASD). An ASD diagnosis is based on the presence of deficits in three areas: communication ability, social interaction, and repetitive and stereotyped behaviors (American Psychiatric Association, 1994). Language abilities among children with autism range from no verbal language to the ability to participate in conversations but difficulty with the higher-order aspects of language. Children with ASD often use language in idiosyncratic, repetitive ways and have difficulty initiating or reciprocating in conversational interactions. Those with higher-level language skills may have difficulty comprehending abstract language or making inferences (Rice, Warren, & Betz, 2005). Children with higher language ability are often diagnosed with a form of autism called Asperger syndrome. Although many aspects of their language are relatively well developed, individuals with this particular form

of autism have substantial problems with social interaction that greatly affect their ability to develop and maintain peer relationships.

Specific language impairment, or SLI, a developmental disability associated with decreased language abilities, is defined as language disorder in the absence of frank neurological, sensorimotor, nonverbal cognitive, or socioemotional deficits (see Watkins & Rice, 1994). A hallmark of SLI in English-speaking children is a delay or deficit in the use of grammar, particularly as related to grammatical morphemes (e.g., plural *-s*, past tense *-ed*). Specifically, children with SLI omit morphemes long after their peers with typical language development show consistent production of these morphemes. Language difficulties may become apparent early in life and typically remain throughout childhood and into adolescence. Although the most widely noted deficit is grammar, other domains of language are typically affected by SLI (see Leonard, 2000). A diagnosis of SLI puts children at greater risk for later academic difficulties, particularly reading disabilities (Bishop & Adams, 1990; Catts, Adlof, Hogan, & Weismer, 2005). Additionally, these language difficulties most likely influence peer interactions, with research indicating that children with SLI have trouble initiating and responding to peers (Hadley & Rice, 1991) and are typically more withdrawn than their peers with typical language development (Fujiki, Brinton, Isaacson, & Summers, 2001).

Instructional Objectives in Language

The language domains discussed thus far in this chapter provide a framework for developing a scope of instruction that ensures an emphasis on language development within the early education setting. The term *scope* refers to the breadth of instructional objectives to be addressed during teaching. Instructional objectives describe the desired learning outcomes of instruction and provide the means to move a child to competence in a given language ability. In this section we discuss objectives across language skills discussed earlier in this chapter, to include both lower-level skills (syntax, morphology, vocabulary) and higher-level skills (inferencing, comprehension monitoring, text structure knowledge). Table 9.1 includes a possible scope of instruction that could be implemented within early childhood and kindergarten classrooms.

Grammar (Syntax and Morphology)

Because grammatical skills in preschool are highly predictive of later reading achievement and provide a foundation for higher-level language skills (e.g., Scarborough, 1990), educators should include specific classroom instruction related to this language ability. One instructional objective targeting grammatical competence is using a variety of phrase structures, such as prepositional phrases, noun and verb phrases, and adjectival phrases. This objective can be made developmentally appropriate for younger preschool students by eliciting production of noun phrases that include the following: a determiner or article, an adjective, and a noun (e.g., *the big cow*). A more complex indicator for kindergarten students might be to use prepositional phrases (e.g., *over the hill*).

As children acquire more complex language skills, they begin to modulate their utterances by producing a wider array of grammatical morphemes (Brown, 1973). An appropriate objective for young children is understanding and producing morphemes, such as plurals and past tense. A preschool indicator could involve use of plural markers (i.e., *ducks*), while a more advanced indicator might require the correct use of past tense *-ed* (i.e., *kicked*).

TABLE 9.1. Instructional Objectives across Lower- and Higher-Level Language Domains

Language skill	Instructional objectives
Syntax	1. Use a variety of verbs to signal changes in tense 2. Use a variety of phrase structures (prepositional phrases, noun phrases, adjectival phrases) 3. Use and respond to a variety of question types
Morphology	1. Comprehend and produce grammatical morphemes (plural, past tense) 2. Comprehend and produce common derivational affixes 3. Comprehend and produce compound words (e.g., superman)
Vocabulary	1. Use abstract nouns and verbs 2. Distinguish shades of meaning 3. Produce definitions for words
Inferencing	1. Comprehend and produce questions about mental states and motives 2. Comprehend and produce questions about causes of events 3. Generate predictions about future events
Comprehension monitoring	1. Summarize narratives 2. Summarize information in expository texts 3. Comprehend nonverbal information in narratives and expository text
Text structure knowledge	1. Identify key story elements (i.e., setting, characters, plot, theme) 2. Identify key differences between text structures of narrative and expository text 3. Retell a story including main story grammar elements

Vocabulary

The one aspect of oral language that is often incorporated into general classroom instruction is vocabulary, and indeed there is a strong correlation between vocabulary knowledge and general reading ability (e.g., NICHD Early Child Care Research Network, 2005; Stanovich, 1986; Stanovich, Cunningham, & Freeman, 1984). However, young children have vastly diverse vocabularies (Biemiller & Slonim, 2001), and those differences place many children at risk for difficulties in learning to read and comprehend text. Recent research has shown that direct instruction does have a positive effect on young children's vocabulary knowledge (e.g., Justice, Meier, & Walpole, 2005; NICHD Early Child Care Research Network, 2005; Penno, Wilkinson, & Moore, 2002). Teaching children to distinguish between shades of meaning is one way to provide direct instruction in vocabulary. The ability to discern subtle meanings in words becomes increasingly important as text in expository books or narratives becomes more complex. To promote this skill a teacher could ask students to distinguish the differences among nouns within a common category. When discussing flowers in a garden, for instance, children could learn names of various types of flowers, such as *roses, tulips*, and *daisies*. A more difficult indicator would be to distinguish the difference between verbs that can be used to describe movement. These words, such as *run, walk, stroll*, and *prance*, all involve someone moving from one place to another, but the way in which this movement is accomplished is vastly different.

Inferencing

Recall that inferencing involves predicting or deducing something that is not explicitly stated. An inference contrasts sharply with literal language, in that it requires some sort of prior or world knowledge to deduce meaning. A literal discussion of text emphasizes

recalling facts that were directly presented in text or accompanying pictures, whereas an inferential discussion goes beyond that which is directly stated. Research has shown that preschool-age children are able to engage in inference making (van den Broek et al., 2005; van Kleeck, 2006); thus, objectives related to inferencing should be part of early childhood classroom instruction. One objective that focuses on such skills requires children to answer questions related to a character's mental state or actions that are not explicitly stated in the text. An example of a question that taps inferential abilities is "How do you think the bird felt when he couldn't find his mother?" A similar type of question requires that children answer questions regarding what course of action a character might take (e.g., "Where do you think the bird should go now?"). These types of questions motivate children to use their background knowledge or reasoning skills to provide a feasible answer.

Comprehension Monitoring

Good readers are typically aware of their comprehension as they listen to or read written text, and when they experience difficulty, they automatically use a variety of strategies to increase their comprehension (Pressley & Afflerbach, 1995). However, young children are likely to have a difficult time monitoring their comprehension independently. Because of this, instructional objectives related to comprehension monitoring should be included in early childhood instruction. One method for encouraging comprehension monitoring is to ask children to summarize a story. *Summarizing* requires that children identify the most salient parts of a story and then retell that information in their own words. Asking a child periodically to summarize parts of a storybook will help alert the child to parts of the story that he or she did not understand. Children can also be asked to summarize information learned in an expository text.

Text Structure

Text structure refers to the characteristics of written material, as well as the way ideas in a text are constructed and organized. Researchers suggest that increasing students' knowledge about text structure facilitates their ability to attend to the most salient details in the text, thereby increasing comprehension (e.g., Carnine & Kinder, 1985; Gersten, Fuchs, Williams, & Baker, 2001). One relevant objective centers on knowledge of important parts of a fictional narrative, often called *story grammar*. Story grammar elements were formulated by Stein and Glenn (1979) to categorize the various elements used by children to comprehend and generate stories. In its simplest form, story grammar element consists of a main character, his or her problem, his or her attempts to solve the problem, and events that lead to a resolution or ending (Mandler & Johnson, 1977; Stein & Trabasso, 1982). There is empirical evidence that instruction in story grammar components is effective in improving comprehension of narrative text (e.g., Carnine & Kinder, 1985; Dimino, Gersten, Carnine, & Blake, 1990). A specific objective for young children related to story grammar is retelling a story aloud using the key story elements. As children become increasingly aware of the essential components of a story, they are more likely to understand a novel story and be able to include the important parts when composing their own story.

The former objective focused on teaching elements related to fictional narratives. Expository texts are typically not as widely used as narratives in early childhood and primary classrooms; however, recent work has shown the importance of expository texts for building background knowledge (Williams, Stafford, Lauer, Hall, & Pollini, 2009). Expository text is generally more difficult to understand and remember than narrative text, primarily because the content in expository text is less familiar and the structure is more difficult than

that in narrative texts (Kucan & Beck, 1997). However, scholars have argued for increased use of expository text in early childhood and primary grade classrooms (e.g., Caswell & Duke, 1998; Pappas, 1991; Williams, 2005). One objective related to assisting young children in learning from nonfiction texts is to teach differences in features between this type of text and narrative texts. For example, teachers can point out that narratives include story grammar elements such as characters and problems, but expository texts focus on information and include elements such as compare–contrast.

Approaches to Teaching Lower- and Higher-Level Language Skills

Once an instructional scope and sequence is established, educators need an arsenal of empirically validated instructional techniques they can use to teach objectives across the language domains. Research across many decades has identified *causally interpretable relations* between specific instructional techniques and children's growth in lower- and higher-level language skills. In this section, we provide research-based techniques that have been shown to improve children's language abilities; these instructional techniques are included in Table 9.2.

Focused Stimulation

In focused stimulation, a common instructional technique used in early childhood settings (e.g., Ellis Weismer & Robertson, 2006), the targeted goal is repeated several times within an interaction, and the focus is on increasing the child's exposure to the form. Activities are arranged in such a way as to encourage, but not require, production of the target form. Focused stimulation is typically utilized during naturalistic conditions, such as play, to encourage generalization of the target. Researchers have found that a focused stimulation

TABLE 9.2. Empirically Validated Techniques Integrated for Language-Based Comprehension Instruction

Language skill	Instructional techniques	References
Syntax	• Focused stimulation	Fey, Cleave, Long, & Hughes (1993); Zevenbergen & Whitehurst (2003)
Morphology	• Focused stimulation • Cloze procedures	Bradshaw, Hoffman, & Norris (1998); Ellis Weismer & Robertson (2006)
Vocabulary	• Rich, extended instruction • Dialogic reading • Focused stimulation	Beck & McKeown (2007); Coyne, McCoach, & Kapp (2007); van Kleeck, Vander Woude, & Hammett (2006); Wasik & Bond (2001)
Inferencing	• Inferential questioning • Interpretative cloze	Bradshaw et al. (1998); van Kleeck (2006); van Kleeck, Vander Woude, & Hammett (2006)
Comprehension monitoring	• Self-questioning training • Think alouds	Glaubman, Glaubman, & Ofir (1997)
Text structure knowledge	• Clue words • Graphic organizers	Williams et al. (2005)

approach is an effective way to teach a variety of grammatical forms to young children (e.g., Fey, 1986; Zevenbergen & Whitehurst, 2003). Earlier, teaching the plural *-s* morpheme was identified as an appropriate instructional objective for young children; focused stimulation can be used to expose children to that target form. For example, during a free-play activity involving animals, an adult could provide many models of the plural form during conversation about the animals.

ADULT: I have a cat—oh, I have two *cats*.

ADULT: I will put the *cats* in the barn.

ADULT: And now I will put four *dogs* with the *cats*. Look—*dogs* and *cats* are both in the barn!

ADULT: Do you see any *animals*? What *animals* do you see?

During this short exchange the adult provided eight models of correct use of the target form. Again, the adult is not directly eliciting utterances from the child, although the context/activity provides ample opportunity for the child to produce plural forms. Focused stimulation has been utilized to address many aspects of language use, including grammar (e.g., Fey, 1986) and vocabulary (e.g., Girolametto, Pearce, & Weitzman, 1996).

Dialogic Reading

One evidence-based intervention for supporting language and literacy skills is dialogic reading (Whitehurst & Lonigan, 1998), which occurs during interactive storybook reading, with adults encouraging children to communicate verbally by asking questions, providing explicit feedback related to questions and comments, and gradually eliciting retells of the story. The assumption is that the feedback and practice will facilitate language development. When learning about dialogic reading, adults are encouraged to remember the PEER strategy (from Zevenbergen & Whitehurst, 2003):

Prompt: Prompt a response by asking a question about the story.
Evaluation: Evaluate the child's response and provide feedback.
Expand: Expand on what the child says.
Repeat: Repeat original prompt, encouraging the child to repeat or expand upon feedback.

Research has shown that dialogic reading can improve the language and literacy skills of young children (Wasik & Bond, 2001; Whitehurst et al., 1988), including those at high risk for reading disabilities (Valdez-Menchaca & Whitehurst, 1992).

Rich, Extended Instruction

Researchers have demonstrated that vocabulary gains in young children can be achieved by providing explicit instruction of word meanings (Beck, Perfetti, & McKeown, 1982; Coyne, McCoach, & Kapp, 2007; McKeown, Beck, Omanson, & Pople, 1985). Beck, McKeown, and Kucan (2002) stated that extended instruction "offers rich information about words and their uses, provides frequent and varied opportunities for students to think about and use words, and enhances students' language comprehension and production" (p. 2). Within this type of vocabulary instruction teachers provide explicit definitions for words that may be seen in storybooks but may be difficult for children to understand without assistance.

The definitions should be provided in child-friendly language; an example would be defining the word *dash* as "to run very fast." In addition to providing explicit instruction of the definitions, interactive opportunities to use the words should be set up in the classroom to extend students' understanding of the meanings of the target vocabulary words. In work by Coyne and colleagues (2007), teachers engaged kindergarten students in a variety of extension activities, such as recognizing examples of target words, answering questions about target words, and formulating sentences using the target words.

Inferential Questioning

Storybooks often contain details that are not explicitly stated, and for this reason it is crucial that children acquire the ability to make inferences from what they hear in text. Evidence suggests that young children need adult scaffolding and explicit instruction to learn to make inferences (Oakhill, Cain, & Bryant, 2003). Questions posed by adults during shared storybook reading provide a natural context in which to address inferencing. However, research has shown that although adults do ask questions during book reading, the majority of questions posed by both parents and teachers are literal in nature (van Kleeck, Gillam, Hamilton, & McGrath, 1997). Storybook reading is an ideal context in which to address objectives related to making inferences. One technique that has been utilized in research studies with young children includes embedding inferential questions during book-reading activities (e.g., van Kleeck, Vander Woude, & Hammett, 2006). Prior to reading aloud with children, teachers can identify locations within a story in which an inferential question should be asked. For example, if a main character in a story becomes angry based on another character's actions, a teacher could stop reading and ask, "Why is the boy mad?" Generating questions and embedding them within a story ahead of time (e.g., writing prompts on sticky notes and putting them in the book) prevent teachers from forgetting to ask such questions.

Self-Questioning Training

Accomplished readers consistently ask themselves questions about what they have read. Self-questioning helps readers make connections between what is read and identify gaps in comprehension. Glaubman, Glaubman, and Ofir (1997) found that kindergarten children were able to enhance their story comprehension when they learned to self-question. After reading aloud to children, teachers can model self-questioning by asking simple questions related to important components in the text. For example, after reading a story aloud, a teacher could ask aloud, "What did the boy do after his mother left?" The teacher could then turn to the portion of the story that answers that question, read it aloud, or show the picture to the students, and say, "Oh, I remember, he started walking to look for help."

Clue Words

The use of clue words can foster children's understanding of both narrative and expository text (e.g., Williams et al., 2005). For example, clue words can be very helpful in relation to expository text. Once young children understand the meaning of the words *same* and *different*, these words can be used in compare–contrast activities after reading expository text. Thus, in a lesson in which children learn about animals, teachers can use these words to help students dictate sentences using these clue words: "Giraffes and koala bears are the *same* because they both eat leaves. Giraffes and koala bears are *different* because giraffes are big and koala bears are small." Clue words such as *before, then*, and *next* are important within a narrative structure and may assist children in keeping track of important story elements.

For example, a teacher could scaffold a child's retelling of a story by prompting, "But what happened *before* the boy was late for school?"

Both the instructional objectives and the empirically validated techniques described in the previous sections can be incorporated into lesson plans to be used in preschool or primary grade classroom. An example of such a lesson plan is included in Figure 9.1.

Conclusions

Oral language abilities contribute greatly to children's social and academic success; therefore, early childhood educators should make a concerted effort to enhance these abilities in early childhood classrooms. In this chapter we have presented objectives and instructional techniques that early childhood educators can implement in a classroom setting. This information should support teachers in their efforts to increase the quantity and quality of language-based instruction, which should improve children's listening and reading comprehension as they move through the primary grades.

Weekly Objectives	**Instructional Techniques**
• Comprehend and produce grammatical morphemes • Use and respond to a variety of question types • Distinguish shades of meaning • Comprehend and produce questions about causes of events	• Focused stimulation • Dialogic reading • Clue words
Materials Needed *A Pocket for Corduroy* by Don Freeman (Viking Press, 1978)	
Prereading Activity Hold the text so all children can see the cover. Remind the children that they read this book with you previously. Ask for volunteers to describe some of the things they recall about this book. **Expand** upon what individual children say by adding grammatical information to their utterances. For instance, if a child says, "She hug the bear," you could say: "That's right, the girl hugged Corduroy at the end of the story." Then say, "What did the girl do at the end of the story?" Encourage students to use correct tense in response. Continue this process as long as children are volunteering information.	
During Reading Stop and ask questions related to target vocabulary words. Prompt children to discuss the difference in meaning between similar words. For example, say, "The book says Corduroy was drowsy. Does drowsy mean the same thing as sleepy? Does it mean the same thing as really tired? Name one time that you have been drowsy." Engage children to discuss that drowsy is similar to sleepy but is not the same as really tired or exhausted.	
After Reading When the text is complete, say, "Now we are going to talk about the important parts in the story. Who can tell me what happened first in the story?" Scaffold the students to retell each part of the story either individually or as a group. Use clue words *before, then*, and *after* to facilitate children's answers and retellings. Provide many opportunities for students to use regular past tense *-ed* (i.e., "Corduroy smelled the soap," "The man washed his clothes").	

FIGURE 9.1. Sample lesson for preschool.

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