

## **Research Summary: Language and Literacy Development (LLD) Domain in the DRDP (2015) Assessment Instrument**

The **Language and Literacy Development (LLD)** domain assesses the progress of all children in developing foundational language and literacy skills. These skills can be demonstrated in any language and in any mode of communication. The LLD measures should be completed for all children, including those who are dual language learners. Language and literacy skills in a child's first language form the foundation for learning English. Therefore, dual language learners may demonstrate knowledge and skills in their home language, in English, or in both languages.

### **LLD 1: Understanding of Language (Receptive)**

In infancy, children show understanding of a small number of familiar words, but they differ in the rate at which they learn to produce their first words (Clark, 2016), and production usually lags behind comprehension (Clark, 2016). The research shows that children's first 40–50 words represent a small number of domains such as people, food, body parts, clothing, animals, vehicles, toys, household objects, routines, and activities (Clark, 2016; Bergelson & Swingley, 2012; Depaolis, Vihman, & Keren-Portnoy, 2014). Infants also begin to react to their caregiver's tone of voice by turning and looking in the direction of the sound, listening when the caregiver speaks to them, and beginning to respond to requests (e.g., "come here"). They also enjoy games like peek-a-boo (Levey, 2014, pp. 150–153). In early toddlerhood, children show understanding of one-step requests related to the current situation. For example, a child will point to body parts when asked and follow simple instructions such as "kiss the doll" or "roll the ball." In later toddlerhood, children demonstrate understanding of the meaning of others' comments, questions, requests, or stories (American Academy of Pediatrics, 2004, p. 307).

Research indicates that children's ability to comprehend sentences with simple structures increases to more complex sentences in the later preschool years, such as those with embedded clauses (Cohen Sherman & Lust, 1993; Clark, 2016; Herr-Israel & McCune, 2011; Theakston, Maslen, Lieven, & Tomasello, 2012). Children's ability to understand language is boosted by their pragmatic skills, i.e., using language appropriately in social situations and throughout conversations (Tomasello, 2009; Veneziano, 2013; Clark, 2016). Comprehension of indirect or non-literal meaning of language also begins in the preschool years (Eson & Shapiro, 1982). All told, children's ability to understand language starts with simple vocabulary, phrases, and sentences, and moves forward to complex vocabulary, phrases, and sentences. The ability to comprehend literal meaning of language develops before the skills to comprehend non-literal and then figurative language.

### **LLD 2: Responsiveness to Language**

In infancy, children show understanding of a small number of familiar words and awareness of the infant care teacher's overall tone of voice. In early toddlerhood, children show understanding of one-step requests that have to do with the current situation. And in later toddlerhood, children demonstrate understanding of the meaning of others' comments, questions, requests, or stories (American Academy of Pediatrics 2004, p. 307).

Children's responses to utterances develop along the progression from nonverbal to verbal responses (Bishop, Chan, Adams, Hartely, & Weir, 2000; Goldin-Meadow, 2007). For example, compared to older children, younger children more frequently use nods or gestures to respond to adult solicitations (Bishop et al., 2000), and by toddlerhood they begin to produce relative clauses, which in English are marked by *who*, *which*, or *that* (Clark, 2016). Because children's responses to utterances depend on their receptive and expressive language, their ability to respond shows a similar developmental trajectory as the development of receptive and expressive language. Thus, with age, they develop the ability to respond to increasingly complex utterances and

content, moving from one-step requests to multiple-step requests, from familiar topics to unfamiliar topics, and from concrete ideas to abstract ones (Holmburg, 1980; Mueller, Bleler, Krakow, Hegedus, & Cournoyer, 1977; Reuter & Yunlk, 1973). It is important to note that, although children of preschool age may perfectly understand unfamiliar synthetic compounds and syntactic structures (e.g., washing-machine, snow-flex), they lag behind in production (Clark, 2016).

### **LLD 3: Communication and Use of Language (Expressive)**

In infancy children practice making sounds and use speech or experiment with non-crying sounds to communicate needs, wants, or interests and get and keep attention. In later infancy, they use one or two words although the sounds are not adult-like and may not be clear (Levey, 2014, pp. 150–153). In early toddlerhood, children say a few words and use conventional gestures to tell others about their needs, wants, and interests (American Academy of Pediatrics, 2004, p. 270; Coplan, 1993, p. 1; Hulit & Howard, 2006, p. 142). In later toddlerhood, children communicate in a way that is understandable to most adults who speak the same language they do. Children combine words into simple sentences and demonstrate the ability to follow some grammatical rules of the home language (American Academy of Pediatrics, 2004, p. 307; Parks, 2004; Lerner & Ciervo, 2003; Hart & Risley, 1999, p. 67).

Children's ability to communicate with others becomes increasingly more complex with age (Huttenlocher, Vasilyeva, Cymerman, & Levine, 2002; Caselli, Rinaldi, Stefanini, & Volterra, 2012). They start narrowly and then increase the use of meanings of word forms they already have (Clark, 2016, pp. 429–432). By kindergarten age "children are typically able to produce complex-compound sentences that include the conjoining of two sentences using *and* or *but* as well as clauses embedded within the sentences (e.g., 'I will go because she said to but I don't really want to') (Curenton & Justice, 2004)" (California Department of Education, 2010, pp. 76–77). They use utterances in the future tense by late preschool or kindergarten age (Gard, Gilman, & Gordon, 2012), and by kindergarten age they use the regular past tense (Valian, 2006; Rice, Wexler, & Redmond, 1999). As they grow older, their utterances continue developing into more sophisticated, complete, and adult-like structures (Nippold, 2007).

### **LLD 4: Reciprocal Communication and Conversation**

In infancy, children participate in back-and-forth communication and games, and communicative intentions are social and oriented toward the child's caregiver. Maintaining eye gaze is an essential part of communication, with children progressively following the adult's gaze and eye direction, imitating action, and gesturing to get the adult's attention to objects or events in the environment. In later infancy children understand that caregivers make directed noises to draw attention to an external object. This "joint attention" is non-linguistic triadic behavior, involving *you*, *it*, and *me*, from which language emerges (Tomasello, 2000). For example, when the adult says "look at the dog," the adult directs the child's attention and the child is able to look at the adult and then toward the dog. In early toddlerhood, children use conventional gestures and words to communicate meaning in short back-and-forth interactions and use the basic rules of conversational turn-taking when communicating (Bloom, Rocissano, & Hood, 1976). In later toddlerhood, children engage in back-and-forth conversations that contain a number of turns, with each turn building upon what was said in the previous turn (Hart & Risley, 1999, p. 122). At early preschool age, children start to use the word "please" as they understand how to use polite requests to get what they want (Levey, 2014, p. 193) and learn how to start a conversation by using language. For example, they begin by learning to say "hey" to gain the adult's attention and then later learn to express complex constructions such as "know what happened?" At this age their conversation becomes more coherent, and they are able to discuss past events, frequently using *yesterday* to indicate the past tense.

Children's ability to communicate with others increases with age (Greenwood, Walker, Todd, & Hops, 1981). This increase in communication skills develops hand in hand with their expressive and receptive language.

As their expressive and receptive language abilities improve, children of kindergarten age become more capable of providing an increasing amount of information in order to maintain the topic of conversation, build on and make inferences related to others' ideas (Bedrosian, 1985), and decrease the gap in verbal interaction (Dewart & Summers, 1997). The greater amounts of input (talk) facilitate the development of children's vocabulary and semantic-syntactic constructions. Engaging in conversations with adults increases the frequency of specific grammatical morphemes that the child hears and consequently uses. The child develops increasingly sophisticated understanding of the pragmatics of communication, i.e., the social rules that govern the use of language and other communicative behaviors.

### **LLD 5: Interest in Literacy**

In infancy, children actively notice print in the environment, explore books, and show interest in adult-initiated literacy activities, such as looking at photos and exploring books together with an adult (Bayley, 2006, p. 57; National Research Council, 1999, p. 28). In early toddlerhood, children listen to the adult and participate while being read to by pointing, turning pages, or making one- or two-word comments. In later toddlerhood, children show appreciation for books and initiate literacy activities by listening, asking questions, or making comments while being read to; looking at books on their own; or making scribble marks on paper and pretending to read what is written (Schickedanz & Casbergue, 2009, p. 11).

Children's interest in literacy changes across time and with experience as they learn to value and understand the components of literacy. The transition to real reading involves changes not only in composition skills but also in concepts and appreciation about the nature of literacy (Snow, Burns, & Griffin, 1998). Interest in literacy involves curiosity and interest-seeking behaviors; if something is interesting, children actively attend to it (Renninger & Wozniak, 1985; Silvia, 2008). The research literature has demonstrated that interested students interact with the object or text for its own sake and are likely to experience internalized effects similar to intrinsic reward (Hidi, 2006; Krapp, 2005). Hidi (2001) reviewed evidence demonstrating that interest in literacy has a strong positive influence on children's comprehension and recall. The developmental progression of interest in literacy has been extensively studied by researchers such as Sulzby (1985) and Dunst & Shue (2005). Their work shows that children's interest in literacy progresses from initially pointing and labeling pictures in a book, followed by initiating opportunities to share books, to "reading" a story through the illustrations, to telling the story using book language, and finally to reading conventionally using the text of a story. An important transition is when children's choice of books to learn about new ideas and concepts is self-initiated (Cunningham & Zibulsky, 2014). This development represents an important shift in value and interest in literacy. Part of that developmental progression is when children's "reading" of stories changes from sounding like oral language to sounding like written language. This transition demonstrates a change in ideas from thinking of reading as spoken words to understanding that reading is recreated from written text that has special ways of wording that they choose to engage in (McGee & Richgels, 2012).

### **LLD 6: Comprehension of Age-Appropriate Text**

Children's comprehension of text begins with simply describing or asking about events and objects presented in books in the preschool years. By kindergarten age they are able to demonstrate knowledge of main events, characters, settings, and problems (van Kleeck, 2008). As their comprehension skills develop, they also increasingly think and talk about the order of events in stories and the relationship between cause and effect (Kendeou et al., 2005; Mandler & Johnson, 1977; Brown, 2008). Causal reasoning is a prerequisite for inferential thinking—since inferential thinking is more sophisticated than causal reasoning and usually difficult for young children (Trabasso & Stein, 1997), it typically shows up much later than the literal comprehension of text. However, with appropriate supports, children of kindergarten age are capable of making inferences (van den Broek et al., 2005; van Kleeck, 2008). Comprehension of text depends on listening comprehension skills, and children will experience reading difficulties if they have not developed commensurate language comprehension

skills as reading ability develops (Adlof, Perfetti, & Catts, 2011). Metacognitive skills—the awareness and knowledge of one’s own mental processes such that one can monitor, regulate, and direct oneself to a desired goal—develop at later kindergarten age. Children demonstrate their metacognition for text comprehension in the later part of early reading development by asking or answering questions to monitor their own comprehension.

### **LLD 7: Concepts About Print**

The construct of “concepts about print” entails a number of concepts and ideas that the young child needs to acquire. These concepts include an understanding that print—the written words on the page—carries a message and that it is organized and read in a particular way. Initially, the young child learns the concept that a book is an object to handle and can be used to turn pages. To become able to independently read a book, children in the preschool years progress to developing an understanding that print goes from left to right and top to bottom on a page, and that a book has an upright orientation, and that the pages go from front to back (National Early Literacy Panel, 2008). As they move into kindergarten, children learn that print carries a meaningful message and can be used to serve a variety of useful functions such as telling a story, listing items to get at the grocery store, and labeling items. By later preschool or early kindergarten age, children learn that, although pictures in books are meaningful, what we read are the printed words on the pages and that text represents spoken words that are written (Nichols, Rupley, Rickelman, & Algozzine, 2004). By the end of kindergarten, children progress to a more sophisticated understanding of print and recognize that words are made up of letters, separated by spaces, and that punctuation marks play a role in what we read (Lonigan & Shanahan, 2009).

### **LLD 8: Phonological Awareness**

“Phonological awareness’ is generally defined as an individual’s sensitivity to the sound (or phonological) structure of spoken language independent of meaning. Spoken language is made up of different phonological units that differ in their linguistic complexity. The phonological units include words, syllables, subsyllabic units (onsets, rimes), and individual sounds (phonemes)” (California Department of Education, 2010, p. 79). The developmental progression of phonological awareness skills starts from larger to successively smaller units of sound (Adams, 1990; Anthony et al., 2002; Anthony, Lonigan, Driscoll, Phillips, & Burgess, 2003; Phillips, Clancy-Menchetti, & Lonigan, 2008; Lane, Pullen, Eisele, & Jordan, 2002). Children’s ability to perceive and manipulate sounds moves from larger sounds (words, syllables) in preschool to increasingly smaller sounds (phonemes) in kindergarten to placement of the phonemes within a word (initial, final to medial) by the end of kindergarten (Anthony & Francis, 2005). Tasks that assess or teach phonological awareness include identification tasks such as first-sound matching, synthesis tasks such as phoneme blending, and/or analysis tasks such as deleting phonemes. By the end of kindergarten children are typically able to perceive and manipulate initial phonemes in words (Anthony et al., 2003; Ehri & Roberts, 2006).

### **LLD 9: Letter and Word Knowledge**

Children progress from initially identifying letters in their environment to a more specific and refined understanding of letter names and their corresponding sounds. Research suggests that children develop alphabetic knowledge at different rates depending upon their level of exposure to print. Justice, Pence, Bowles, and Wiggins (2006) demonstrated that the most common letter to learn was the first letter in a child’s name. McBride-Chang (1999) found that most children learn uppercase letters and then fold in lowercase letter development with a knowledge of all of the letters of the alphabet by the end of kindergarten.

When studying letter-sound correspondences, Justice et al. (2006) showed that children who are at the early stage of pairing letters and sounds learn some letter-sound correspondences more readily than others. Letter names that provide a clue to the sound they represent are more readily acquired (for example, B /b/

overlap in sound), as compared to letter-sound patterns (e.g., F /f/) that do not overlap. Piasta, Purpura, and Wagner (2010) demonstrated that children are more likely to learn letter-sound correspondences when the focus is on promoting the acquisition of letter names and sounds jointly, rather than focusing on letter-sound instruction alone. Finally, as children solidify their understanding of concepts of print and letter and word knowledge, they acquire the ability to assemble and disassemble the individual letter-sounds within words to decode (Ehri, 2005; Piasta & Wagner, 2010).

### **LLD 10: Emergent Writing**

Writing is viewed as a major achievement on the road to literacy. It requires a complex, coordinated set of abilities that include memorization, recall of specific letter shapes, and the motoric skills needed to print legible letters in a correct sequence. Significantly, studies of writing across a variety of written language systems, including Dutch, Hebrew, and Spanish, demonstrate similarities in the conceptual and procedural development of young children's scribbles to the formation of legible letters to represent words (e.g., Ferreiro & Teberosky, 1982; Treiman, Levin, & Kessler, 2007; Both-de Vries & Bus, 2010). According to Justice and Vukelich (2007), the developmental sequence of writing typically proceeds in five general stages: (1) drawing/scribbling; (2) letters/letter-like units; (3) beginning stages of invented spelling; (4) later stages of invented spelling; and (5) conventional spelling and writing.

In early toddlerhood, children are able to hold small objects in one hand, or between their fingers and thumb as with a crayon (Bayley, 2006, p. 131), sometimes use both hands together to manipulate objects (Meisels, Dombro, Marsden, Weston, & Jewkes, 2003, p. 40), and scribble with big arm movements. In early to middle toddlerhood they display an interest in writing by scribbling and making marks on paper (Rowe & Neitzel, 2010). In later toddlerhood and early preschool, children coordinate the fine movements of the fingers, wrists, and hands to skillfully manipulate a wide range of objects and materials in intricate ways. Children often use one hand to stabilize an object while manipulating it, and use their thumb, index, and middle fingers to draw or write with a crayon, marker, or pencil (Bayley, 2006, p. 136; Apfel & Provence, 2001, p. 33).

Early (or emergent) writing plays a role in a child's later literacy achievement (Clay, 2000; Puranik & Lonigan, 2011; Teale & Sulzby, 1986). Writing in early childhood is defined as the "knowledge and use of symbolic representation of information, ideas, and emotions through recorded language" (California Department of Education, 2010). This includes scribble marks and graphic messages by late toddlerhood and early preschool that gradually transform into recognizable letters and words by kindergarten age (Bowman, Donovan, & Burns, 2000). A child's ability to write his or her name by kindergarten is one of the strongest predictors of later conventional literacy in elementary school, including spelling (National Early Literacy Panel, 2008; Lonigan, Schatschneider, & Westberg, 2008).

Past and current findings indicate that one's own name is usually the first word a child writes well before mastering other, often simpler words (e.g., consonant-vowel-consonant words) (Both-de Vries & Bus, 2010; Clay, 1975; Puranik & Lonigan, 2012). In fact, the landmark achievement of name writing is considered "the first indicator of a child's writing competence" (Puranik, Lonigan, & Kim, 2011, p. 1) and a key stepping stone into the world of print (e.g., Bloodgood, 1999; Welsch, Sullivan, & Justice, 2003).

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