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Assessing Comprehension in the Emerging Language Stage

Developmental level: 8–24 months

Language level: Brown's stages I–II; Mean length of utterance 1.0–2.5

Production milestones: At this level, children are producing single words and some early word combinations. Vocabulary size is generally small, fewer than 100 words. Few morphological markers are used. Phonological repertoire may also be limited, with certain consonants and syllable types (consonant-vowel-consonant [CVC], multisyllabic words) missing.

Children in the emerging language stage, which corresponds in typical development from about 8 to 24 months of age, understand very little of the language spoken to them. Our task is to document how much true linguistic comprehension is present. In addition, though, we want to examine the extent to which nonlinguistic and discourse-level strategies are used to aid comprehension of more advanced forms. The procedures in this chapter are designed to look at the types of words and word combinations a child can understand, rather than to make a complete catalog of all the words and sentences a child knows. You will try to assess whether the child understands *any* action words, for example, not to develop a list of all the action words the child comprehends.

ADMINISTRATION PROBLEMS THAT MAY ARISE

The administration of these procedures can present clinicians with some unique problems. A discussion of these problems and some suggestions for avoiding them follows.

First, attention at this age is very fleeting. You will need to ensure that the child is attending to the task or objects before scoring the response. Because the procedures are informal, you can repeat items if you believe the child was not attending, but attention will have to be monitored carefully throughout the assessment session.

Second, comprehension strategies can be very misleading as you interpret responses to spoken language throughout this period. Parents and caregivers, in particular, although very reliable in other observations about their children, may mistakenly believe that their youngsters understand everything said to them. In order to focus specifically on linguistic comprehension, you will want to be careful to avoid giving the kinds of nonlinguistic cues children frequently use to derive meaning. Two specific suggestions for avoiding this problem are as follows:

- Be careful not to look at the object you are naming when asking a child to identify it.
- Be sure you are not gesturing toward the object as you name it.

It is easy to give nonverbal cues such as these unconsciously because they are a part of typical interaction with children of this age. When testing for linguistic comprehension, though, you must be careful to eliminate nonverbal cues. If a child fails to respond accurately to the purely linguistic information, we can consciously add the nonverbal cues, giving the same linguistic stimulus, while looking at or gesturing toward an object. If these cues result in improved performance, we can credit the child with a developmentally appropriate strategy, even though the linguistic comprehension is not in evidence. In this way we can begin to document both linguistic and discourse-level comprehension in children with emerging language skills.

Another issue at this developmental level is inconsistency of performance. You will want to ensure that a correct response to any stimulus is not a matter of chance. To make sure, elicit at least two correct responses for each class of items.

In this stage, it is important to determine whether the child understands words only in the context of familiar routines, or also out of context (i.e., a new context for the child or an unlikely situation for the word to appear). So, you will probably want to give the child instructions to carry out in both expected and unexpected settings. You might ask the child to turn the page while reading a book, for example, and to turn the page when an open book is nearby but not being looked at directly. Another contextual issue concerns whether a child can identify objects both within view and when out of sight. If a child can identify an object by name from an array of objects in immediate view, it will also be useful to know whether the child can search for the same object under the table, for example, when its name is mentioned. The ability to find mentioned objects, whether they are absent or present, is a verbal version of object permanence tasks often used to assess nonverbal cognitive status at this level. As such, it is helpful to assess object permanence in a nonverbal format, using procedures like those described by Dunst (1981), in conjunction with this phase of comprehension assessment. In this way, performance on the nonverbal task can be compared to performance on verbal items. If the child is unable to do the nonverbal version of the task, you will be less willing to attribute failure on the verbal activity to a language-specific problem than if the child can perform the nonverbal object permanence tasks, but fails only to search for objects when they are named.

ASSESSMENT GUIDELINES

Normative data collected by Miller et al. (1980) for performance on the procedures in this chapter are given in Table 2.1. Clinically, a child who is passing items that are passed by 75% of children in his or her age group is considered to be doing fine. If the child is not passing items that are passed by 50%–75% of children in his or her age group, you may want to reevaluate comprehension in that child in 2–3 months. If lags are still seen, a comprehension problem may be present.

In assessing discourse-level comprehension during this stage, questions will concern the child's ability to participate in discourse structure, such as turn-taking, and to engage in early topic-sharing activities primarily around joint reference to objects and events. Presuppositional skills are quite primitive at this point, involving primarily the ability to recognize the new or changing aspect of a situation (Greenfield, 1978). However, children in this stage are quite good at deriving illocutionary

Table 2.1. Percentage of children in each age group passing a comprehension item at least once

Comprehension item	Age group (months)			
	10–12	13–15	16–18	19–21
Person name	100	100	92	92
Object name	42	100	100	100
Action verb	8	33	75	83
Absent person or object	0	17	33	67
Possessor-possession	0	8	42	83
Action-object	0	8	42	67
Agent ^a -action	0	0	8	58
Agent ^a -action-object	0	0	0	8

^aOther than child.

Data from Miller, J.F., Chapman, R.S., Branston, M., & Reichle, J. (1980). Language comprehension in sensorimotor stage V and VI. *Journal of Speech and Hearing Research*, 23(2), 284–311.

intent for requests by using something like a child-as-agent strategy (i.e., interpreting complex remarks as requests for the child to do something) (see Paul [1990] for a review). The discourse comprehension procedures outlined in this chapter are quite informal and are used mainly to investigate whether the child is becoming involved in simple conversational exchanges.

PREPARATION FOR ASSESSMENT

Remember that the vocabularies of children in this stage are very limited. The vocabulary used in all of the procedures designed for this period of development must be individualized for each child and each procedure. You will want to get a list of words that the child may know from the parent or caregiver. The child's own toys may be most easily recognized, so it may be a good idea to ask parents to bring toys from home to be used in testing. Other familiar items, such as baby dolls, farm animal toys, eating utensils, and familiar clothing items (life- or doll-size) can be added to the assessment materials.

In order to proceed with testing comprehension at the emerging language stage, then, you will need to do the following:

1. Assemble the favorite or familiar toys from the child's home and add some developmentally appropriate objects of which the parents think the child understands the names.
2. Use a comfortable room with a rug, a low child's chair, and an easy chair for lap sitting.
3. Make a list of stimuli you will be using on a score sheet (an example of a score sheet appears on p. 35) to facilitate recording trials and correct responses.
4. Judge each parent's ability to participate in the testing. In most cases, a parent can perform an invaluable role in holding and comforting the child and in making suggestions for altering stimuli or response sets.

Then get down on the floor and get started!

PROCEDURE
2.1



Comprehension of Familiar Routines

DEVELOPMENTAL LEVEL	8–12 months
LINGUISTIC LEVEL	Lexical
LINGUISTIC STIMULI	Words taken from routine games played regularly by the child and parent or caregiver
RESPONSE TYPE	Natural—behavioral compliance: entering the game when mentioned with appropriate gestures
MATERIALS	None
PROCEDURE	<ol style="list-style-type: none">1. Ask parents to demonstrate one of the games they often play with the child (e.g., pat-a-cake, peekaboo, “So Big,” “I’m gonna-get-you”) without using gestures or motor activities to cue the child.2. Play more than one game when possible and use appropriate intonation both with and without words to distinguish between intonation and lexical cues.3. If the child fails to respond to the words for any game, take the opportunity to demonstrate to parents the power of gestures in cuing what appear to be appropriate responses to verbal language.4. Record responses on a score sheet like the one on page 35.
PASSING RESPONSE	The child enters game(s) at parent’s or caregiver’s verbal request with appropriate gestures.

PROCEDURE
2.2



Joint Reference Activity

DEVELOPMENTAL LEVEL	8 months and up
LINGUISTIC LEVEL	Discourse
LINGUISTIC STIMULI	Natural conversation
RESPONSE TYPE	Natural—behavioral compliance
MATERIALS	<ul style="list-style-type: none">• Age-appropriate toys
PROCEDURE	<ol style="list-style-type: none">1. Have the parent play with toys and talk with the child as he or she might at home.2. Observe whether the child's attention can be directed to particular objects and activities by the parent's use of speech and gestures. Attention is signaled by looking at the object the parent points out, moving toward it, or acting on it in some way. <p>Note that the purpose of this procedure is <i>not</i> to ascertain whether the child has lexical comprehension of the words the parent uses, but whether the child can use auditory and visual cues to focus attention on objects of common interest. This ability lays the basis for the comprehension strategy examined in Procedure 2.3.</p> <ol style="list-style-type: none">3. Record responses on a score sheet like the one on page 35.
PASSING RESPONSE	The child attends to objects indicated by the parent.
DIAGNOSTIC NOTE	Children with autism often have more difficulty in this area of discourse development than children without autism (Wetherby & Prutting, 1984). Therefore, it is a good diagnostic indicator. If a child shows frequent request functions using nonverbal means (e.g., pulling an adult to an object), but makes very little use of joint attention, autism may be suspected. Children who show joint attentional behavior, however, but are not using verbal means of expression, may have a more specific language disorder.

PROCEDURE
2.3



Comprehension of Object and Person Names

DEVELOPMENTAL LEVEL	12–18 months
LINGUISTIC LEVEL	Lexical
LINGUISTIC STIMULI	Object names produced by the child or that the parents believe the child knows
RESPONSE TYPE	Natural—attention to objects
MATERIALS	<ul style="list-style-type: none">• Toys or objects brought by the parent whose names the child says or may know• Other common objects, such as a shoe, diaper, bottle, ball, truck, and baby doll• To test for comprehension of person names, one or two people the child knows (e.g., parent[s], a caregiver)
PROCEDURE	<ol style="list-style-type: none">1. Place several of the objects on the floor in front of the child.2. Get the child's attention by calling his or her name in a loud, sing-song manner.3. Present the name of the object you want the child to choose in a simple carrier phrase such as, "Where's the shoe?" Use exaggerated intonation to mark the object's name (shoe). Repetition of the carrier phrase is allowed.4. Repeat the procedure using different objects. Be sure to name an object the child is not already attending to, and be sure not to point to or look at the object you are naming. (This is harder to do than it sounds!) Only those objects on which the child is to act should be visible. In a novel situation, young children may be too distracted if extraneous stimuli are not controlled. Person names may be tested as well, by asking, "Where's Mama?" or by asking the child to indicate other familiar people in the room when the child is looking elsewhere.5. Record responses on a score sheet like the one on page 35.
PASSING RESPONSE	The child looks at, shows, or gets object named or the child looks at or indicates person named. An appropriate response is repeated in several trials for each object or person name.

RESPONSE STRATEGIES

- Look at what the adults look at
- Act on objects noticed
- Imitate ongoing activities

To avoid being misled by these strategies, be sure not to look at the object being named, or to use any gestures in administering these items.

PROCEDURE 2.4



Comprehension of Action Words

DEVELOPMENTAL LEVEL	12–24 months
LINGUISTIC LEVEL	Lexical
LINGUISTIC STIMULI	Action words that the child produces or the parent thinks the child may know, such as <i>tickle, hug, kiss, pat, smell, blow, eat, throw, open, close, and hit</i>
RESPONSE TYPE	Natural—behavioral compliance
MATERIALS	<ul style="list-style-type: none">• The same objects used in Procedure 2.3• The same people as in Procedure 2.3
PROCEDURE	<ol style="list-style-type: none">1. Complete Procedure 2.3.2. Place the objects used in Procedure 2.3 on the floor in front of the child.3. Get the child's attention by calling his or her name in a sing-song manner.4. Tell the child to perform an action on the object he or she is playing with, such as "kiss it" or "throw it." Use exaggerated intonation to mark the action word (<i>kiss</i> or <i>throw</i>). Person names may be tested if the child is already attending to someone (e.g., mother) by saying "Pat Mother" or "Tickle Mother." <p>Be sure the action the child is asked to perform on the available objects is unconventional; otherwise the child may appear to comprehend the verb by using the "do what you usually do with this object" strategy. Stimuli and commands may be repeated in this procedure also. Because only single-word comprehension is being tested, unconventional actions may be requested on objects. For example, if the child is playing with a book, you may say, "kiss it" or "throw it," but avoid asking the child to perform a conventional action such as "open it."</p> <ol style="list-style-type: none">5. Record responses on a score sheet like the one on page 35.
PASSING RESPONSE	The child performs the action requested. The response is repeated in several trials at different times in the testing session with intervening items.
RESPONSE STRATEGY	<ul style="list-style-type: none">• "Do what you usually do" (i.e., conventional use of objects)
DEVELOPMENTAL NOTE	Children in this developmental stage often know more object than action words.

PROCEDURE
2.5



Comprehension of Words for Absent Persons and Objects

DEVELOPMENTAL LEVEL	18–24 months
LINGUISTIC LEVEL	Lexical
LINGUISTIC STIMULI	Object names produced by the child that the parents believe the child knows
RESPONSE TYPE	Natural—attention to objects
MATERIALS	<ul style="list-style-type: none">• Toys or objects brought by the parent whose names the child says or may know• Other common objects, such as a shoe, diaper, bottle, ball, truck, and baby doll• To test for comprehension of person names, one or two people the child knows (e.g., parent[s], a caregiver)
PROCEDURE	<ol style="list-style-type: none">1. Complete Procedure 2.3.2. Choose words the child has responded to successfully in Procedure 2.3.3. Place the child so some of the familiar objects and people are hidden from view (e.g., behind the child, behind the examiner).4. Request object or person identification as in Procedure 2.3 (e.g., “Where’s the shoe?”, “Where’s Mama?”).5. Record responses on a score sheet like the one on page 35.
PASSING RESPONSE	The child searches for object or person named. He or she may then get, give, or show the object. If an absent person is out of the room, the child may look or go to the door, or possibly cry at being unable to find the person named. Response is repeated in several trials.

PROCEDURE
2.6



Comprehension of Early Two-Word Relations

DEVELOPMENTAL LEVEL	18–24 months
LINGUISTIC LEVEL	Syntactic
LINGUISTIC STIMULI	Person, object, and action words combined to express the following semantic relations: Possessor-Possession (e.g., <i>Mommy's shoe</i>) Action-Object (e.g., <i>Kiss the truck!</i>) Agent-Action with child as agent (e.g., <i>Maria, jump!</i>) Agent-Action-Object (e.g., <i>Maria, kiss the truck!</i>)
RESPONSE TYPE	Natural—behavioral compliance
MATERIALS	<ul style="list-style-type: none">• Toys or objects brought by the parent whose names the child says or may know• Other common objects, such as a shoe, diaper, bottle, ball, truck, and baby doll• To test for comprehension of person names, one or two people the child knows (e.g., parent[s], a caregiver)
PROCEDURE	<ol style="list-style-type: none">1. Choose objects and actions for which the child has demonstrated comprehension in Procedures 2.3 and 2.4. <i>Possessor-Possession:</i> Ask the child, "Where's Mama's shoe?" versus "Where's (child's) shoe?"; "Where's (child's) nose?" versus "Where's Mama's nose?" <i>Action-Object:</i> Ask the child to perform an unconventional action on an object he or she is not already attending to. For example, if the child is holding a doll, say "Kiss the truck," rather than "Kiss the doll." <i>Agent-Action and Agent-Action-Object with the child as agent:</i> Ask the child to perform an action ("Sally, jump!") or an action on an object ("Sally, bite the doll!") to which the child is not already attending.2. Record responses on a score sheet like the one on page 35.
PASSING RESPONSE	The child responds correctly to both elements in the instruction. The response is repeated in several trials.

RESPONSE STRATEGIES

- Locate objects mentioned
- Give evidence of notice
- "Do what you usually do" (i.e., conventional action)
- "Child as agent" (i.e., child acts on objects or persons in the way mentioned)

PROCEDURE
2.7



Turn-Taking in Discourse

DEVELOPMENTAL LEVEL	18 months and up
LINGUISTIC LEVEL	Discourse
LINGUISTIC STIMULI	Conversation to child
RESPONSE TYPE	Natural—responding when spoken to
MATERIALS	<ul style="list-style-type: none">• Appropriate play materials
PROCEDURE	Observe the child engaged in play with a parent or familiar adult for 10–15 minutes.
RECORDING	<ol style="list-style-type: none">1. On a score sheet like the one on page 36, record the number of child-directed utterances produced by the adult that would be expected to elicit a verbal response (i.e., questions and comments directed to the child).2. Record the number of child responses. <p>For the purpose of this analysis, it is not necessary to record the <i>content</i> of the adult's remark or the child's response. Here we only want to know whether the child understands his or her conversational obligation to respond to speech with speech. This analysis can, then, be done on line by keeping a tally of adult utterances and child responses:</p> <p>Adult's child-directed utterances: TTT TTT TTT TTT = 22</p> <p>Child's verbal responses: TTT = 6</p> <p>If the conversation is recorded, it may be transcribed and the content analyzed, if needed. Alternatively, the percentage of contingent responses can be analyzed using a score sheet like the one on page 36.</p> <ol style="list-style-type: none">3. To derive the percentage of times the child fulfills conversational obligation, divide the number of child responses by the number of adult remarks.4. Compare this percentage to normative data from Bloom, Rocissano, and Hood (1976) for children between 25 and 36 months of age (see data on the score sheet on p. 36 and Procedure 3.2).
DIAGNOSTIC NOTE	Children at this level are not expected to respond to <i>all</i> remarks addressed to them, but they should respond to some. By the late preschool to early school years they should respond to most. In adult conversation, failure to respond when spoken to is considered a serious breach of politeness.

FOR USE WITH
PROCEDURES:
2.1 2.4 3.3
2.2 2.5 3.7
2.3 2.6



SCORE SHEET

Assessing Comprehension of Words and Simple Sentences

Instructions: This form is designed as a summary form to record responses across procedures. It may be amended to meet your individualized needs (e.g., you may wish to record many more responses for each procedure). As it appears here, you may record responses in four trials by indicating the word(s) the adult uses as linguistic stimuli under "vocabulary used" and scoring the child's responses for each trial. Use the key below.

Child's name: _____

Child's chronological age (years.months): _____

Date: _____



Procedure	Developmental level (months)	Linguistic structure being tested	Vocabulary used	Responses			
				1	2	3	4
2.1	8-12	Lexical structure within routine game					
2.2	8 and up	Joint reference activity					
2.3	12-18	Lexical comprehension of object and person names outside of routine					
2.4	12-24	Lexical comprehension of action words outside of routine					
2.5	18-24	Lexical comprehension of words for absent persons and objects					
2.6	18-24	Syntactic comprehension of early two-word relations					
3.3	24-48	Syntactic comprehension of two- and three-word relations with toys as agents					
3.7	30-60	Syntactic comprehension of word order					

Scoring key: ✓ = Correct response
X = Incorrect response (note strategy used, if any)
NR = No response

FOR USE WITH
PROCEDURE:
2.7



SCORE SHEET

Assessing Turn-Taking in Discourse

Instructions: Following the example in Procedure 2.7, tally the adult's child-directed utterances and the child's verbal responses. If desired, compute the percentage of times the child fulfills conversational obligation. Compare this percentage to the data in the table below.

Child's name: _____

Child's chronological age (years.months): _____

Date: _____



Adult utterances versus child responses tally	Total
Adult's child-directed utterances:	
Child's verbal responses:	

Optional computation:

Percentage of times child fulfills conversational obligation (divide the total number of child's verbal responses by the number of adult's child-directed utterances):

_____ %

Average distribution of topic continuations in children's utterances

Average age (months)	Average MLU	Contingent responses (%)	Imitative responses (%)	Total contingent + imitative responses (%)
21	1.26	21	18	39
25	2.60	33	6	39
36	3.98	46	2	48
46	4.45	96	2	98

Source: Bloom, Rocissano, & Hood (1976).

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