

Speech-Language Assessment

Overview of Instruments

Speech and language pathologists (SLPs) are nationally certified by the American Speech, Language and Hearing Association (ASHA). To practice in the state of Texas, SLPs must also hold a Texas state license. Because autism is a communication disorder, children identified with autism require the service of an SLP. In its 2006 *Principles for Speech-Language Pathologists in Diagnosis, Assessment, and Treatment of Autism Spectrum Disorders across the Life Span [Technical Report]*, ASHA states “Given the importance of social communication in the diagnosis of ASD[s], the SLP can play an important role in both screening and diagnosis” (p. 1). Therefore, SLPs should be specifically trained in the areas to diagnose autism, including communication, social interaction, restricted, repetitive and stereotyped patterns of behavior, interests and activities.

As a member of the multidisciplinary team, the SLP must administer assessment tools in the areas of language functioning and should be skilled in providing informal assessments to determine a disability in the area of speech and language. The standardized assessment tools discussed below are only a starting point and should be used in conjunction with observations, informal assessments, and parent and teacher interviews in the determination of a disability in the area of autism. For example, informal assessments could include language sampling. For students with verbal/linguistic skills, the following areas may be assessed (as determined by the student’s language abilities): range of communicative forms and functions, responsiveness to speech (i.e., the proportion of adult utterances to which the child responds), mean length of utterance (MLU), echolalia, pronoun use, discourse management (e.g., topic maintenance, turn taking, appropriate topic shifts), register variation (i.e., using appropriate language forms with different conversational partners and in varying situations), and presupposition (i.e., the understanding of what it is reasonable to assume the communication partner knows) (Paul, 2007).

Language sampling for young students with preverbal/prelinguistic skills should include the following areas, as deemed appropriate for the individual student: rate of communication, use of communicative gaze and gestures, quality of vocalizations, responsiveness to speech and gestures, range of communicative functions expressed (i.e., behavior regulatory functions versus social functions), and quality of play (Paul, 2007). Language sampling for older students with nonverbal/prelinguistic skills may also include assessment of communication forms and functions as well as assessment for use of an augmentative and alternative communication device (AAC).

The following table lists assessments that are appropriate for use with students who are verbal and those who have prelinguistic/preverbal skills.

Assessment Name	Preverbal/ Prelinguistic	Verbal/ Linguistic
Children’s Communication Checklist-Second Edition		X
Clinical Evaluation of Language Fundamentals-Fourth Edition		X
Clinical Evaluation of Language Fundamentals-Preschool, Second Edition		X
Communication and Symbolic Behavior Scales Developmental Profile	X	
The Communication Matrix	X	
Comprehensive Assessment of Spoken Language		X
Language Curriculum-Referenced Assessment		X
Informal Language Sample		X
Preschool Language Scale -4	X	X
Receptive-Expressive Emergent Language Scale-3	X	X
The Rossetti Infant-Toddler Language Scale	X	
Test of Language Development: Intermediate-4		X
Test of Language Development: Primary-4		X
The Test of Pragmatic Language, Second Edition		X
Test of Problem Solving 2-Adolescent		X
Test of Problem Solving, Third Edition, Elementary		X

CHILDREN’S COMMUNICATION CHECKLIST-SECOND EDITION (CCC-2)

The Children’s Communication Checklist-Second Edition, U.S. Edition (CCC-2; Bishop, 2003) is a norm-referenced measure designed to assess children’s communication skills in the areas of pragmatics, syntax, morphology, semantics, and speech. It is used with children who speak in sentences and whose primary language is English. The CCC-2 is administered using a Caregiver Response Form on which the caregiver rates the frequency with which the child demonstrates the communication behavior described in each item. For the purposes of this measure, a caregiver is defined an adult who has had regular contact with the child for at least three months.

CLINICAL EVALUATION OF LANGUAGE FUNDAMENTALS-FOURTH EDITION (CELF-4)

The Clinical Evaluation of Language Fundamentals-Fourth Edition (CELF-4; Semel, Wiig, & Secord, 2003) is an individually administered instrument used for identifying, diagnosing, and tracking language skill deficits in individuals ages 5-0 through 21-11. The CELF-4 was designed to identify individuals who lack the basic foundations of mature language use: word meanings (semantics), word and sentence structure (morphology and syntax), and the recall and retrieval of spoken language (memory). The test is composed of six core subtests that differ according to the student’s age, plus two supplementary subtests. The subtests are used to compute the Receptive, Expressive, and Core Language scores.

CLINICAL EVALUATION OF LANGUAGE FUNDAMENTALS-PRESCHOOL- SECOND EDITION (CELF-P2)

The Clinical Evaluation of Language Fundamentals-Preschool-Second Edition (CELF-P2; Wiig, Secord, & Semel, 2004) is an individually administered instrument designed to assess performance in the aspects of language that are considered to be fundamental to the development of effective communication skills for children aged 3 through 6. It is comprised of six subtests: Linguistic Concepts, Sentence Structure, and Basic Concepts in the area of Receptive Language and Recalling Sentences in Context, Formulating Labels, and Word

Structure in the area of Expressive Language. Together, they are used to derive an Expressive Language Composite, Receptive Language Composite, and a Total Language Score.

COMMUNICATION AND SYMBOLIC BEHAVIOR SCALES DEVELOPMENTAL PROFILE (CSBS DP)

The Communication and Symbolic Behavior Scales Developmental Profile (CSBS DP; Wetherby & Prizant, 2001) is a norm-referenced screening and evaluation tool that helps determine the communicative competence (use of eye gaze, gestures, sounds, words, understanding, and play) of children with a functional communication age between 6 and 24 months (chronological age from about 6 months to 6 years). Any professional trained to assess developmentally young children is approved to administer this assessment tool. The CSBS DP may be used as a screening tool, a norm-referenced assessment, or a progress indicator. It measures the following seven language predictors in young children: Emotion and Eye Gaze, Gestures, Communication, Sounds, Words, Understanding, and Object Use.

The following areas are measured by the three main components of the CSBS DP: Infant-Toddler Checklist, Caregiver Questionnaire, and Behavior Sample. The Infant-Toddler Checklist is available as a free download from the publisher's website. The checklist may be based on parent report or observation by a qualified professional. It is a one-page document that addresses three main composite areas: social, speech, and symbolic. A total score is obtained and compared to a "cutoff score" that yields a descriptor of "concern" or "no concern." The publisher sells scoring software for the checklist.

This checklist is designed to be used only to decide if further information or evaluation is needed. It should be completed approximately every 3 months for children between 6 and 24 months, because new communication skills are emerging each month. The Caregiver Questionnaire is a four-page document that the caregivers can fill out independently. It should be completed before the child is brought in for the Behavior Sample. It takes approximately 15 to 25 minutes. The Behavior Sample includes suggestions for eliciting spontaneous behaviors from the child and offers varying degrees of structure from the caregiver or administrator. It

should be administered and scored at the same time as the Caregiver Questionnaire; it takes about 30 minutes to complete. The CSBS DP includes a toy kit for the examiner to use if desired.

THE COMMUNICATION MATRIX

The Communication Matrix (Rowland, 1996) is designed to determine how a child communicates and to provide a framework for determining communication goals. It is primarily used by speech-language pathologists and educators to document the communication skills of children who have severe or multiple disabilities, including children with sensory, motor, and cognitive impairments. It assesses skills typical of normally developing children from birth through 24 months of age. It is not appropriate for children who are fluent language learners. The newest version, originally designed for parents, is online. It is also available for purchase in a printed version. The original is available in print form.

The results are summarized on a one-page Profile and a Communication Skills List highlighting communication function, message content, and communication form. The Communication Matrix involves three major aspects of communication: communication function, message content, and the communication form. The Matrix is organized into four major functions that appear across the top of the columns on the Profile:

- to REFUSE – expresses discomfort, protests, refuses, or rejects something
- to OBTAIN – expresses comfort, continues an action, obtains more of something, requests more of an action, requests a new action, requests more of an object, makes choices, requests a new object, requests objects that are absent
- to engage in SOCIAL interaction – expresses interest in other people, attracts attention, requests attention, shows affection, greets people, offers things or shares, directs someone’s attention to something, uses polite social forms
- to provide or seek INFORMATION – answers “yes” and “no” questions, asks questions, names things or people, makes comments

COMPREHENSIVE ASSESSMENT OF SPOKEN LANGUAGE (CASL)

The Comprehensive Assessment of Spoken Language (CASL; Carrow-Woolfolk, 1999) is an individually and orally administered language assessment battery for individuals ages 3 through 21. The CASL provides an in-depth evaluation of the oral language processing systems of auditory comprehension, oral expression, and word retrieval; the knowledge and use of words and grammatical structures of language; the ability to use language for special tasks requiring higher-level cognitive functions; and the knowledge and use of language in communicative contexts. Specifically, the battery is designed to measure the processes of comprehension, expression, and retrieval in four language categories:

- Lexical/semantic skills: knowledge and use of words and word combinations. Tests include Basic Concepts, Antonyms, Synonyms, Sentence Completion, and Idiomatic Language
- Syntax skills: knowledge and use of grammar (morphology and syntax). Tests include Syntax Construction, Paragraph Comprehension, Grammatical Morphemes, Sentence Comprehension, and Grammaticality Judgment
- Supralinguistic skills: comprehension of complex language whose meaning is not directly available from lexical or grammatical information. Tests include Nonliteral Language, Meaning from Context, Inference, and Ambiguous Sentences
- Pragmatic language skills: awareness of appropriate language in a situational context and the ability to modify this language as necessary

INFORMAL LANGUAGE SAMPLE

An informal oral or written language sample typically allows a speech-language pathologist to determine the child's functional language skills. The sample is often elicited using a picture, sabotaged testing environment, planned play activities, or a story starter. When analyzing an elicited language sample within an AU assessment, the professional must not only analyze the child's mean length of utterance (MLU) and grammatical skills, but also look deeper into the sample to analyze such language skills as communicative intent, presuppositions, social register, figurative language, sequencing of events, and story development. If possible, oral and written

skills should both be assessed, and samples should be compared to determine if the child displays a strength in either oral or written language. Language samples are the tool that most speech pathologists feel most adequately trained in completing. Many also choose to complete an informal language sample because of the versatility of this tool; that is, it allows the professional to examine as much or as little linguistic information as is necessary to “fill in the gaps” from the child’s formal assessment profile.

LANGUAGE CURRICULUM-REFERENCED ASSESSMENT (LCRA)

The Language Curriculum-Referenced Assessment (LCRA; Cannon, Johnsen, Malone, Walsh, & Fagan, 2002) is a criterion-referenced assessment instrument that uses the language areas of listening comprehension, oral expression, semantics, syntax, and pragmatics to identify areas of strengths and challenges. It is recommended that the LCRA be administered by an SLP knowledgeable about typical language development and disorders of listening comprehension, oral expression, semantics, syntax, and pragmatics.

The LCRA enables the SLP to define meaningful Texas Essential Knowledge & Skills (TEKS)-based objectives for each student with identified language deficits. The assessment instrument is designed to identify mastered and unmastered skills and processes, not age-level performance. Therefore, it is recommended that parents be advised of developmental skills strengths and needs in communication skills rather than the student’s performance on a particular grade level. The authors suggest that standardized assessment results may be helpful to parents and teachers in understanding how a student is performing relative to other children his/her age. The LCRA is designed to be administered with students ages 3 through high school and is divided into IV Levels:

- Level I – designed for children entering a Preschool Program for Children with Disabilities (PPCD) or preschool speech program prior to entering kindergarten
- Level II – designed to identify strengths and needs for students entering kindergarten through second grade
- Level III – designed for student entering third through fifth grade

- Level IV – designed for student from sixth grade through high school graduation

All levels of the LCRA contain directions for administration, a summary sheet of skills, an assessment protocol and stimulus materials. The instrument also includes an optional Pragmatic Skills assessment as well as a Syntax Grid. The Pragmatic Skills assessment, designed to be utilized with students in kindergarten through high school, examines social language and communication with others. The Syntax Grid provides a format for documenting morphologic/syntactic/structural errors noted during administration and/or discourse with the student. The assessment instruments are accompanied by sample lesson plans for teaching specific skills. The plans contain a list of needed materials, a focus and a purpose for the lesson, directions for the lesson, which includes a “strategy” to assist the student in remembering and applying skills learned, and suggested closure.

PRESCHOOL LANGUAGE SCALE-4 (PLS-4)

The Preschool Language Scale-4 (PLS-4; Zimmerman, Steiner, & Pond, 2002) is an individually administered instrument that assesses receptive and expressive language skills in children from birth to 6:11. The PLS-4 provides standard scores and percentile rank scores for the subscales of Auditory Comprehension and Expressive Communication as well as for Total Language. In addition to evaluating receptive and expressive language skills, the PLS-4 includes 3 supplemental assessments: Language Sample Checklist, Articulation Screener, and Caregiver Questionnaire. The Language Sample Checklist may be used with any child who speaks in connected utterances to provide an overview of the content and structure of the child’s spontaneous utterances.

RECEPTIVE-EXPRESSIVE EMERGENT LANGUAGE SCALE-3 (REEL-3)

The Receptive-Expressive Emergent Language Scale-3 (REEL-3; Bzoch, League, & Brown, 2006) is a 132-item checklist that uses reports by parents or guardians to identify major receptive and expressive language problems in infants and toddlers up to 3 years of age. The REEL-3 includes

two core subtests, Receptive Language and Expressive Language, and a supplementary subtest, Inventory of Vocabulary Words.

THE ROSSETTI INFANT-TODDLER LANGUAGE SCALE

The Rossetti Infant-Toddler Language Scale (Rosetti, 2006) was designed to assess the preverbal and verbal aspects of communication and interaction in the young child from birth to 3 years of age. The Rosetti is used to collect samples of behaviors on which to base conclusions about the child's development. It uses direct observation of behavior, eliciting of behaviors, and parent report to assess language skills. The clinician assesses the preverbal and verbal skill areas in the areas of: Interaction-Attachment, Pragmatics, Gesture, Play, Language Comprehension, and Language Expression. Severity Rating Guidelines aid in reporting results and communicating assessment results to parents and caregivers.

TEST OF LANGUAGE DEVELOPMENT: INTERMEDIATE-4 (TOLD: I-4)

The Test of Language Development-Intermediate: 4 (TOLD: I-4; Newcomer & Hammill, 2008a), appropriate for individuals from ages 8 through 17-11, consists of six subtests that measure semantics and grammar skills. Subtests include Sentence Combining, Picture Vocabulary, Word Ordering, Relational Vocabulary, Morphological Comprehension, and Multiple Meanings. Two subtests measure listening abilities; two measure organizing abilities; and two measure speaking abilities. The combination of all six subtests represents overall Spoken Language. Test scores are converted to standard scores, age scores, and percentiles.

TEST OF LANGUAGE DEVELOPMENT: PRIMARY-4 (TOLD: P-4)

The Test of Language Development-Primary: 4 (TOLD: P-4; Newcomer & Hammill, 2008b) contains nine subtests measuring various aspects of oral language in children ages 4 through 8-11: picture vocabulary, relational vocabulary, oral vocabulary, syntactic understanding, sentence imitation, morphological completion, word discrimination, word analysis, and word articulation. The results of the subtests are combined to form composite scores in semantics and grammar; listening, organizing, and speaking; and overall language ability. The purposes of

this measure include identifying children who are significantly below their peers in oral language development, determining oral language strengths and concerns, and providing ongoing documentation of child progress.

THE TEST OF PRAGMATIC LANGUAGE-SECOND EDITION (TOPL-2)

The Test of Pragmatic Language-Second Edition (TOPL-2: Phelps-Terasaki & Phelps-Gunn, 1992) examines social communication in individuals 6 through 18 years of age. The test takes into consideration the following components of pragmatics: audience, topic, purpose, visual-gestural cues, and abstractions. This individually administered instrument is used to identify pragmatic language deficits, determine individual strengths and weaknesses, and document progress.

TEST OF PROBLEM SOLVING 2-ADOLESCENT (TOPS-2-ADOLESCENT)

The Test of Problem Solving 2-Adolescent (TOPS-2-Adolescent; Bowers, Huisingh, & LoGiudice, 2007) is a diagnostic test of problem solving and critical thinking in verbal and print format for adolescent ages 12-0 through 17-11. The TOPS 2-Adolescent addresses these components based on the student's language strategies using logic and experience. The format includes updated passages and questions that focus on five critical thinking areas: Making Inferences, Determining Solutions, Problem Solving, Interpreting Perspectives, and Transferring Insights.

TEST OF PROBLEM SOLVING-THIRD EDITION-ELEMENTARY (TOPS-3)

The Test of Problem Solving-Third Edition-Elementary (TOPS-3; Huisingh, Bower, & LoGiudice, 2005) is a diagnostic test designed for children ages 6 through 12. It assesses critical thinking abilities based on students' language strategies using color photographs. The six subtests address the following areas: Making Inferences, Predicting, Determining Causes, Sequencing, Negative Questions, and Problem Solving.

Summary of Speech-Language Assessment Instruments

Name of Tool and Author	Age Range (in years)	Method of Administration/ Format	Approximate Time to Administer	Subscale	Availability
Children’s Communication Checklist- Second Edition (CCC-2) Bishop (2003)	4-17	Individually administered, norm-referenced measure of communication skills such as speech, vocabulary, sentence structure, and social language of children and adolescents who speak in sentences. The CCC-2 screens for general language impairments and identifies children with pragmatic language impairments; caregiver response forms and scoring worksheets include 70-item questionnaire for parent or caregiver. Yields scaled scores, percentile ranks, confidence intervals, composite score, and index score.	5-10 minutes	Language (speech, syntax and coherence) Pragmatics (initiation), Scripted Language, Context, Nonverbal Communication	Pearson http://www.pearsonpsychcorp.com.au/productdetails/80/1/47

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Name of Tool and Author	Age Range (in years)	Method of Administration/ Format	Approximate Time to Administer	Subscale	Availability
<p>Clinical Evaluation of Language Fundamentals-Fourth Edition (CELF-4) Semel, Wiig, & Secord (2003)</p>	<p>5-21</p>	<p>Individually administered, norm-referenced measure of comprehensive language skills Forms include two record forms (ages 5-8 and 9-21); one observation rating scale form Yields Core Language Score, Receptive Language Score, Expressive Language Scores, Language Structure, Language Content, Language Content and Memory, Working Memory Indexes as standard scores, percentile ranks, and age equivalents</p>	<p>20-45 minutes</p>	<p>Attention to environment, attention to people, play, vocal development, gesture, social communication, vocabulary, qualitative concepts, quantitative concepts, spatial concepts, time/sequence concepts, morphology, syntax, integrative language skills, phonological awareness</p>	<p>Pearson http://www.pearsonassessments.com/HAIWEB/Cultures/en-us/Productdetail.htm?Pid=015-8037-200</p>
<p>Clinical Evaluation of Language Fundamentals-Preschool-Second Edition (CELF-P 2) Wiig, Secord, & Semel (2006)</p>	<p>3-6</p>	<p>Individually administered, norm-referenced assessment of comprehensive language skills Includes a record form and a preliteracy rating scale Yields Total Language Score, Receptive Language Composite, Expressive Language Composite and additional index scores, standard scores, percentile ranks, and age equivalents</p>	<p>30-45 minutes</p>	<p>Core Language, Receptive Language, Expressive Language, Language Content, Language Structure</p>	<p>Pearson http://www.pearsonassessments.com/HAIWEB/Cultures/en-us/Productdetail.htm?Pid=015-8034-945</p>

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Name of Tool and Author	Age Range (in years)	Method of Administration/ Format	Approximate Time to Administer	Subscale	Availability
Communications Matrix Rowland (1996)	All ages at the earliest stages of communication; birth-2 in typically developing child	Individually administered in the form of a caregiver interview and informal observation in natural environment Consists of six-page booklet and summary sheet Yields designation of intention of communicative acts; age ranges; overall developmental language level	"Rapid administration by persons familiar with the assessment"	Four major reasons to communicate: Refusals, Requests, Social Interaction, Provide/Seek Information	The Communication Matrix http://communicationmatrix.org/ (Online version is free)

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Name of Tool and Author	Age Range (in years)	Method of Administration/ Format	Approximate Time to Administer	Subscale	Availability
Communication and Symbolic Behavior Scales Developmental Profile (CSBS DP) Wetherby & Prizant (2001)	.5-6	Individually administered, norm-referenced screening and evaluation tool that helps determine the communicative competence (use of eye gaze, gestures, sounds, words, understanding, and play) in children Includes one-page caregiver questionnaire, four-page infant-toddler checklist, and a behavior sample observation Yields standardized scores, percentile ranks, norm-referenced indicators of need for full developmental assessment	Infant-Toddler Checklist: 5-10 min. Caregiver Questionnaire: 15-25 min. Observation/ Behavior Sample: 30 min.	Measures seven language predictors in young children: Emotion and Eye Gaze, Communication, Gestures, Sounds, Words, Understanding, and Object Use	Brookes Publishing http://www.brookespublishing.com/store/books/wetherby-csbsdp/index.htm

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Name of Tool and Author	Age Range (in years)	Method of Administration/ Format	Approximate Time to Administer	Subscale	Availability
Comprehensive Assessment of Spoken Language (CASL) Carrow-Wolfolk (1999)	3-21	Individually administered, norm-referenced assessment of global language skills Yields standardized scores and percentile ranks, age equivalents, and core composite scores in the areas of lexical/semantic, syntactic, supralinguistic, receptive and expressive Includes two record forms (ages 3-6 and 7-21)	30-45 minutes	Basic Concepts, Antonyms, Synonyms, Sentence Completion, Idiomatic Language, Syntax Construction, Paragraph Comprehension, Grammatical Morphemes, Sentence Comprehension, and Grammaticality Judgment, Nonliteral Language, Meaning from Context, Inference, Ambiguous Sentences, and awareness of appropriate language in a situational context and the ability to modify this language as necessary	Pearson http://psychcorp.pearsonassessments.com/HAIWEB/Cultures/en-us/Productdetail.htm?Pid=PAa3580
Language Curriculum-Referenced Assessment (LCRA) Cannon, Johnsen, Malone, Walsh, & Fagan (2002)	3-17	Individually administered, criterion-referenced assessment of the Texas Essential Knowledge and Skills Yields mastery levels in the areas of: listening comprehension, oral expression, semantics, pragmatics and syntax Includes Summary Sheets levels I-IV; Pragmatic Skills Assessment Checklist; Syntax/Morphology summary grid	30-60 minutes	Texas Essential Knowledge and Skills for each grade level	Plano Independent School District, Department of Special Education 469/752-8240

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Name of Tool and Author	Age Range (in years)	Method of Administration/ Format	Approximate Time to Administer	Subscale	Availability
Preschool Language Scale-4 (PLS-4) Zimmerman, Steiner, & Pond (2002)	Birth-7	Individually administered, norm-referenced assessment of receptive and expressive language in young children Forms: One protocol with expressive and receptive administration items, language sample checklist, PLS-4 Profile, and an articulation screening tool Yields standard scores, percentile ranks, language age-equivalents in the areas of auditory comprehension, expressive language and total language	20-45 minutes	Attention to environment, attention to people, play, vocal development, gesture, social communication, vocabulary, qualitative concepts, quantitative concepts, spatial concepts, time/sequence concepts, morphology, syntax, integrative language skills, phonological awareness	Pearson http://www.pearsonassessments.com/HAIWEB/Cultures/en-us/Productdetail.htm?Pid=015-8659-406
Receptive-Expressive Emergent Language Test-3 (REEL-3) Bzoch, League, & Brown (2006)	Birth-3	Individually administered, norm-referenced caregiver interview measure of expressive and receptive language Includes one record booklet Yields standard scores, percentile ranks and age-equivalents	20 minutes	Receptive Language, Expressive Language, and a supplementary Inventory of Vocabulary Words	Pearson http://www.pearsonassessments.com/HAIWEB/Cultures/en-us/Productdetail.htm?Pid=015-8659-406

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Name of Tool and Author	Age Range (in years)	Method of Administration/ Format	Approximate Time to Administer	Subscale	Availability
The Rosetti Infant-Toddler Language Scale Rosetti (2006)	Birth-3	Individually administered, criterion-referenced assessment of language skills. Includes caregiver interview and option to include observation of elicited behaviors Consists of one test form The items developed for the scale are a compilation of author observation, descriptions from developmental hierarchies, and behaviors recognized and used in the field of infant toddler assessment. Only items that were considered discriminating and representative of a skill at an age were included. Standardization, validity, and reliability are not provided	Varies (10-30 min.)	interaction-Attachment, Pragmatics, Gesture, Play, Language Comprehension, and Language Expression	Linguisticsystems http://www.linguisticsystems.com/products/product/display?itemid=10041
Test of Language Development: Intermediate-4 (TOLD: I-4) Newcomer & Hammill (2008)	8-18	Individually administered, norm-referenced measure of language skills in adolescents Includes one assessment form Yields standard scores, percentile ranks, and age equivalents	30-60 min.	Sentence Combining, Picture Vocabulary, Word Ordering, Relational Vocabulary, Morphological Comprehension, Multiple Meanings	Pearson http://psychcorp.pearsonassessments.com/HAIWE/B/Cultures/en-us/Productdetail.htm?Pid=PAa19036&Mode=summaty

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Name of Tool and Author	Age Range (in years)	Method of Administration/ Format	Approximate Time to Administer	Subscale	Availability
Test of Language Development: Primary-4 (TOLD: P-4) Newcomer & Hammill (2008)	6-19	Individually administered, norm-referenced measure of language skills in preschoolers Consists of one assessment form Yields standard scores, percentile ranks, and age equivalent scores	1 hour	Picture Vocabulary, Relational Vocabulary, Oral Vocabulary, Syntactic Understanding, Sentence Imitation, Morphological Completion, Word Discrimination, Word Analysis, Word Articulation	Pearson http://psychcorp.pearsonassessments.com/HAIWEB/Cultures/en-us/Productdetail.htm?Pid=PAa19075&Mod
Test of Pragmatic Language-Second Edition (TOPL-2) Phelps-Terasaki, & Phelps-Gunn (2007)	6-19	Individually administered, norm-referenced assessment of pragmatic language used to evaluate social language skills—designed to be used with a complete battery of tests Yields percentile ranks, quotient, age-equivalent scores Forms: One examiner record form	45-60 minutes	Physical Setting, Audience, Topic, Purpose (Speech Acts), Visual-Gestural Cues, Abstraction	Pro-Ed www.proedinc.com/customer/productView.aspx?ID=4169

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Name of Tool and Author	Age Range (in years)	Method of Administration/ Format	Approximate Time to Administer	Subscale	Availability
<p>Test of Problem Solving 2-Adolescent (TOPS-2) Bowers, Huisingh, & LoGiudice (2005)</p>	<p>12-18</p>	<p>Individually administered, norm-referenced assessment of critical thinking skills related to situations in and outside the academic setting. Test items are presented both verbally and in print to minimize possible auditory memory or reading deficiencies affecting test performance Includes one test form Yields raw scores, which are converted to age equivalents, percentile ranks, and standard scores</p>	<p>35-30 minutes</p>	<p>Making Inferences, Determining Solutions, Problem Solving, Interpreting Perspectives, Transferring Insights, Total Test Score</p>	<p>Linguisticsystems http://www.linguisticsystems.com/products/product/display?itemid=10440</p>
<p>Test of Problem Solving-Elementary-Third Edition (TOPS-3) Huisingh, Bowers, & LoGiudice (2005)</p>	<p>6-12</p>	<p>Individually administered, norm-referenced assessment of critical thinking abilities based on students' language strategies, using logic and experience Consists of one examiner manual Yields age equivalents, percentile rank, and standard score for each subtest and the total test</p>	<p>35 minutes</p>	<p>Making Inferences, Sequencing, Negative Questions, Problem Solving, Predicting, Determining Causes</p>	<p>Linguisticsystems http://www.linguisticsystems.com/products/product/display?itemid=10362</p>

Summary of Research on Speech-Language Instruments

Name of Tool and Author	Age Range (in years)	Sample Size	Purpose of Study	Outcome
Test of Problem Solving Bennetto, Diehl, Hyman, Morris, & Young (2005)	Autism mean = 8.8 yrs. Control group mean = 9.89 yrs.	Group with AU and control (N = 17 each) matched on verbal IQ and language fundamentals	To determine whether the TOPL would differentiate pragmatic language disorders in children with autism from controls	Children with AU performed significantly lower than control group (t-test): $t = -4.06$
Communication and Symbolic Behavior Scales Developmental Profile (CSBS DP) Allen, Cleary, Goldstein, Kublin, & Wetherby (2002)	.5-3.75	1,003	To determine the accuracy of the CSBS DP tools as a level 1 and 2 screening tool as an early intervention tool for autism	Concurrent validity of checklist, CQ, and BS: Pearson correlation coefficients: Checklist and BS $r = 0.59-0.67$, CQ and BS $r = 0.65-0.71$; Regression analysis: children aged 22-24 mos., three composites explained 51% of variance in receptive language based on the checklist, 45% based on CQ, 61% based on BS; three composites explained 30% of variance in expressive language on checklist, 55% on CQ, 62% on BS; Predictive validity: partial correlations – Checklist $r = 0.47-0.71$, CQ $r = 0.55-0.75$, BS $r = 0.59-0.78$

Misconceptions

Myth	Reality
<p>If the child tests within normal limits on a language assessment, including the pragmatics subtest on a standardized assessment tool, the child cannot qualify as speech impaired.</p>	<p>The child may have underlying communication deficits that these standardized assessment tools do not directly identify as autism.</p> <p>“There are few methods for identifying pragmatic difficulties other than clinical opinion, most published language tests do not assess language use across multiple communicative contexts” (Bellon-Harn & Harn, 2006, p. 4).</p> <p>Although standardized assessments are typically helpful in determining present levels of performance, they often result in a deficits profile that does not translate well to interventions that are family-centered and focused on real-life activities (Diehl, 2003).</p>
<p>If the child gets passing grades and is not struggling academically, there is no need for speech therapy interventions.</p>	<p>The child may still be failing at the underlying social curriculum in the educational setting. For children on the autism spectrum, the goals to communicate, socialize, and conform to societal rules and expectations are the most important part of a child’s curriculum (Klin & Volkmar, 1995).</p>
<p>The child appears to chat with some friends, so he must be social and has good social skills. “He talks to his friends in the cafeteria.”</p>	<p>“... a short encounter or routine interaction will not reveal anything unusual. However, over time and in unexpected situations, it appears that the façade of normality cannot be kept up” (Frith, 2004, p. 675).</p>
<p>“Echolalia is just a normal part of language development.”</p>	<p>“Echolalia peaks at around age 30 months in normal children, and then decreases” (Lovaas, 1981, p. 5, cited in Heffner, 2000).</p> <p>The use of spontaneous language in AU often does not naturally occur. “Persons with autism can get stuck at any point in the continuum and language may not progress beyond echolalia” (Heffner, 2000, p. 7).</p>
<p>The child cannot have Asperger Syndrome because he had a developmental language delay.</p>	<p>Some scholars may argue that it is logically impossible to diagnose AS when using the DSM-IV diagnosis criteria (Frith, 2004).</p> <p>“Though language delay predicts more severe autistic symptomology when children are young [< 6 years old] and has potential as a predictor for later receptive language abilities, there is little evidence for its use to differentiate older autistic spectrum subtypes, of which [Asperger Disorder] and [Autism Spectrum Disorders] are two” (Eisenmajer et al., 1998, p. 532).</p>

References

- American Speech-Language-Hearing Association. (2006). Principles for speech-language pathologists in diagnosis, assessment, and treatment of autism spectrum disorders across the life span [Technical Report]. Available from www.asha.org/policy.
- Allen, L., Cleary, J., Goldstein, H., Kublin, K., & Wetherby, A. (2002). Validity and reliability of the Communication and Symbolic Behavior Scales Developmental Profile with very young children. *Journal of Speech, Language, and Hearing Research, 45*, 1202-1218.
- Bennetto, L., Diehl, J., Hyman, S., Morris, D., & Young, E. (2005). The use of two language tests to identify pragmatic language problems in children with autism spectrum disorders. *Language, Speech, and Hearing Services in Schools, 36*, 62-72.
- Bellon-Harn, M. L., & Harn W. E. (2006). Profiles and social communicative competence in middle school children with Asperger's Syndrome: Two case studies. *Child Language Teaching and Therapy, 22*, 1-26.
- Bishop, D. (2003). *The Children's Communication Checklist-Second Edition, U.S. Edition*. San Antonio, TX: Harcourt Assessment.
- Bowers, L., Huisingsh, R., & LoGiudice, C. (2007). *The Test of Problem Solving 2-Adolescent*. East Moline, IL: LinguiSystems.
- Bzoch, K. R., League, R., & Brown, V. L. (2006). *The Receptive-Expressive Emergent Language Scale-3*. Austin, TX: Pro-Ed.
- Cannon, K., Johnsen, S., Malone, A., Walsh, S., & Fagan, M. (2002). *The Language Curriculum Referenced Assessment*. Plano, TX: Plano Independent School District.
- Carrow-Woolfolk, E. (1999). *The Comprehensive Assessment of Spoken Language*. East Moline, IL: LinguiSystems.
- Diehl, S. F. (2003). The SLP's role in collaborative assessment and intervention for children with ASD. *Topics in Language Disorders, 23*(2), 95-115.
- Eisenmajer, R., Gould, J., Leekam, S., Ong, B., Prior, M., & Welham, M. (1998). Delayed language onset as a predictor of clinical symptoms in pervasive developmental disorders. *Journal of Autism and Developmental Disorders, 28*(6), 531-532.
- Frith, U. (2004). Emanuel Miller lecture: Confusions and controversies about Asperger syndrome. *Journal of Child Psychology and Psychiatry, 45*(4), 672-686.
- Heffner, G. J. (2000). *Judevine® Center for Autism Training at GSSH*. Retrieved July 10, 2007, from <http://www.autism.mybravenet.com>.
- Huisingsh, R., Bowers, L., & LoGiudice, C. (2005). *The Test of Problem Solving, Third Edition-Elementary*. East Moline, IL: LinguiSystems.

- Klin, A., & Volkmar, F. R (1995). *Asperger's Syndrome: Guidelines for treatment and intervention*. New York: Guilford.
- Lovaas, O. (1981). *Teaching developmentally disabled children: The me book*. Austin, TX: Pro-Ed.
- Newcomer, P., & Hammill, D. (2008a). *The Test of Language Development: Intermediate-4*. Austin, TX: Pro-Ed.
- Newcomer, P., & Hammill, D. (2008b). *The Test of Language Development: Primary-4*. Austin, TX: Pro-Ed.
- Ozonoff, S., Miller, J., & South, M. (2000). DSM-IV-defined Asperger Syndrome: Cognitive, behavioral and early history differentiation from high-functioning autism. *Autism, 4*(1), 29-46.
- Paul, R. (2007). Assessing communication in autism spectrum disorders. In F.R. Volkmar, R. Paul, A. Klin, & D. Cohen (Eds.), *Handbook of autism and Pervasive developmental disorders: Volume 2: Assessment, interventions, and policy* (3rd ed.). Hoboken, NJ: John Wiley and Sons.
- Phelps-Terasaki, D., & Phelps-Gunn, T. (1992). *The Test of Pragmatic Language-Second Edition*. Austin, TX: Pro-Ed.
- Rosetti, L. (2006). *The Rossetti Infant-Toddler Language Scale*. East Moline, IL: LinguiSystems.
- Rowland, C. (1996). *The Communication Matrix*. Oregon Health and Science University, Design to Learn; www.designtolearn.com
- Semel, E., Wiig, E., & Secord, W. A. (2003). *Clinical Evaluation of Language Fundamentals: Fourth Edition*. San Antonio, TX: Harcourt Assessment.
- Wiig, E., Secord, W. A., & Semel, E. (2004). *The Clinical Evaluation of Language Fundamentals-Preschool-2nd Edition*. San Antonio, TX: Harcourt Assessment.
- Wetherby, A. M., & Prizant, B. M. (2001). *Communication and Symbolic Behavior Scales Developmental Profile*. Baltimore: Paul A. Brookes Publishing.
- Weatherby, A., & Woods, J. (2003). *Red flags of autism spectrum disorders in the second year of life*. Poster presentation at the annual convention of the American Speech-Language-Hearing Association, Chicago.
- Zimmerman, I. L., Steiner, V. G., & Pond, R. A. (2002). *The Preschool Language Scale-4*. San Antonio, TX: Harcourt Assessment.

Resources and Materials

Ad Hoc Committee on Autism Spectrum Disorders (2006). Principles for speech-language pathologists in diagnosis, assessment, and treatment of autism spectrum disorders across the life span. Washington, DC: American Speech-Language-Hearing Association. Provides information on assessment and interventions for speech-language pathologists.

American Speech-Language Hearing Association, www.asha.org. Website of the leading association for speech-language pathologists. Contains much useful information.

Aspy, R., & Grossman, B. (2007). The Ziggurat Model: A framework for designing comprehensive interventions for individuals with high functioning autism and Asperger Syndrome. Shawnee Mission, KS: Autism Asperger Publishing Company. This material provides a method of matching student characteristics to need and incorporating speech-language interventions throughout a student's day.

Centers for Disease Control Autism Info Center: www.cdc.gov/ncbddd/autism. Provides information on autism assessment.

National Institute of Mental Health (NIMH): <http://www.nimh.nih.gov/health/topics/autism-spectrum-disorders-pervasive-developmental-disorders/index.shtml>. Provides research on autism and assessment and treatment information.

Texas-Speech-Language-Hearing Association: <http://www.txsha.org/>. Provides information on autism, including assessment.