COLORADO GUIDELINES FOR SPEECH-LANGUAGE ASSESSMENT AND ELIGIBILITY

AND THE COMMUNICATION RATING SCALES

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COLORADO GUIDELINES FOR SPEECH-LANGUAGE ASSESSEMENT & ELIGIBILITY

Introduction

Federal and state special education laws and regulations require public school districts to identify, assess and evaluate students from birth through 21 years of age, and then provide speech and language services to students who exhibit speech-language impairments that adversely affect educational performance. Infants and toddlers (birth - 3 years) are identified and assessed through Child Find and provided early intervention through interagency collaboration.

Although a general categorical description of speech-language disability exists in Colorado (Rules for the Administration of the Exceptional Children's Education Act (ECEA, 2000), consistent assessment procedures and criteria for eligibility are lacking. Consequently, local school districts have either developed their own criteria or relied on professional judgment of individual speech and language pathologists (SLPs) to guide the Individual Educational Planning (IEP) team. According to SLPs who returned a survey in 1998 conducted by the Special Education Services Unit of the Colorado Department of Education, as well as reports from parents and other school personnel, variations in criteria and how criteria are applied have contributed to confusion when students move within and across school districts.

The Colorado Department of Education offers these guidelines as a revision to the speech-language "severity rating scale" to help school districts determine which students are eligible for speech and language services under the provisions of the Individuals with Disabilities Education Act (IDEA, 1997) ECEA rules (2000), The Americans with Disability Act (ADA, 1990) and 504 of the Rehabilitation Act, 1974. The guidelines are designed to facilitate the implementation of consistent practices in Colorado for determining student's eligibility for speech and language services as special education or as a related service. They focus on four areas:

I. Speech-Language Pathologist's participation in Child Find and the Child Study process
II. Speech-language assessment and evaluation procedures including decisions about eligibility, service delivery, and discontinuation of speech-language services
III. Assessment and evaluation of students with cultural and/or linguistically diverse backgrounds
IV. Communication scales for determining severity of articulation/phonology, language, voice, fluency, and functional communication.

These guidelines do not provide a formula for determining the length or frequency of intervention sessions for students with particular communication assessment profiles, or selecting the type(s) of service delivery model(s). A variety of factors, such as the student's age, type of communication impairment, attention span, as well as the intervention goals, presence of other impairments and the availability of other support systems influence those decisions.

Purpose of the Guidelines:

1. To suggest how SLPs in the public schools of Colorado may participate in Child Find and the pre-referral Child Study processes.

2. To recommend procedures for the evaluation of students with speech and language impairments including considerations for students who have cultural and linguistic differences or who are infants and toddlers with disabilities.

3. To define a common set of criteria for the identification of speech and language impairments and for the determination of severity, which will assist the IEP team in planning the educational resources to enable the student to succeed in his/her educational program.

4. To recommend ways of documenting the adverse affect on educational performance resulting from speech and language impairment.

5. To propose a variety of intervention service delivery options for students with speech and language impairments.

6. To recommend a common set of considerations to be used in decisions about the discontinuation of speech and language services.

Part I.

The Speech-Language Pathologist's Role in the Child Find and Child Study Process

Child Find:
Infants, toddlers, and preschoolers in Colorado, who may be in need of community services and supports are located, evaluated, and identified through Child Find. Child Find is an interagency collaboration and includes the local education agency (LEA) as an active participant. The Child Find process is also a part of the early identification in the schools for students in kindergarten and above.

Screening and Evaluation Guidelines (1992) for infants, toddlers, and preschoolers (Birth - 5 years) are available through the Colorado Department of Education. These guidelines stress the importance of family participation in the Child Find process.

Speech-Language Pathologists (SLPs) play an important role in the Child Find process. They participate with parents and other professionals in speech-language screenings, assessments and evaluations using a variety of methods, and plan speech-language transition services from home or community-based programs to preschool or from preschool to kindergarten.

Child Study:
When teachers identify students who are having difficulties in their classrooms, they refer them to the child study team in their buildings. This pre-referral process is advantageous for several reasons. It allows regular education teachers and special educators an opportunity to gather information about each student, including the history and nature of the concerns, factors which might be contributing to student difficulties, and attempts by the teacher and/or others to help the student achieve success. The child study process should not imply that a special education referral is an inevitable outcome or a desirable end of the process.

When effectively executed, the child study process has three important outcomes. First, students who need additional support promptly get it. Second, unnecessary referrals to special education, which result in inefficient use of personnel time and paper work are avoided. Third, when a student needs to be assessed and evaluated for special education eligibility, information gathered by the child study team assists the evaluation team in planning and conducting a more focused assessment and evaluation. This facilitates completing the assessment process within or before mandated deadlines, reducing pressure on personnel and increasing prompt implementation of necessary programs and services.

The speech-language pathologist (SLP) can play an important role in this pre-referral process. In fact, many communication problems can be resolved or sufficiently mitigated

without referral to special education when appropriate educational accommodations and/or modifications in curriculum and instruction, individual literacy plans, positive behavioral supports, or regular education remedial programs are implemented. The cause of a communication problem does not necessarily reside within the student, but may result from the interaction between the student and the educational environment. The SLP brings considerable knowledge regarding how communication weaknesses interact with the communication demands of classrooms. The SLP and classroom teacher, along with other members of the team, analyze the environmental factors that can suppress or enhance a student's communication performance. This analysis can lead to practical classroom solutions that enable students who are having difficulty experiencing success.

By participating as a member of the child study team, the SLP may be instrumental in helping teachers develop classroom environments that enhance communication skill development and ensure successful achievement by students with marginal communication skills. It is after attempts to modify the educational setting to match the student's needs and learning styles, and these attempts have not met with success, that a special education referral would be initiated.

Referral from Child Study for a Speech-Language Evaluation:

The speech-language evaluation is just a piece of the total process of a special education evaluation. The referral for a speech-language evaluation should occur after the child study team has determined that more information is needed about speech and/or language abilities, or when the teacher and parent agree that such an evaluation is warranted. The SLP should collect the information from the child study team or others who have knowledge about the communication abilities of the student.

Part II.

Speech-Language Assessment and Evaluation Procedures

The purpose of the speech-language evaluation is to describe the student's communication behavior, including the nature and scope of any speech-language impairment and any adverse affect on educational performance, in order to determine his/her eligibility for speech-language as special education or related services. The IDEA, 1997 specifies the following circumstances that require evaluation (formal or informal) of a student:

1. Prior to the initial provision of speech-language as special education or as a related service;

2. At least every three years, or if conditions warrant a reevaluation, or if the teacher or parents request a reevaluation; and

3. Before determining that a child no longer has a disability, except when termination of eligibility is due to graduation with a regular high school diploma or the student exceeding age eligibility for a free appropriate public education.

The following rules apply to the evaluation and eligibility of students in public education under IDEA.

Evaluation procedures (IDEA, Rules and Regulations, 1999, Section 300.532, 20 U.S.C. 1412 (a)(6)(B), 1414(b)(2) and (3)):

Each public agency shall conduct a full and individual initial evaluation, in accordance with Section 300.532 and 300.533, before the initial provision of special education and related services to a child with a disability under Part B of the Act.

Each public agency shall ensure, at a minimum, that the following requirements are met:

(a)(1) Tests and other evaluation materials used to assess a child under Part B of the Act--

(i) are selected and administered so as not to be discriminatory on a racial or cultural basis; and

(ii) are provided and administered in the child's native language or other mode of communication , unless it is clearly not feasible to do so; and

(2) materials and procedures used to assess a child with limited English proficiency are selected and administered to ensure that they measure the extent to which the child has a disability and needs special education, rather than measuring the child's English language skills.

(b) A variety of assessment tools and strategies are used to gather relevant functional and developmental information about the child, including information provided by the parent, and information related to enabling the child to be involved in

and progress in the general curriculum (or for a preschool child, to participate in appropriate activities), that may assist in determining--

(1) Whether the child is a child with a disability under Section 300.7; and

(2) The content of the child's IEP.

(c)(1) Any standardized tests that are given to a child--

(i) Have been validated for the specific purpose for which they are used; and

(ii) Are administered by trained and knowledgeable personnel in accordance with any instructions provided by the producer of the tests.

(2) If an assessment is not conducted under standard conditions, a description of the extent to which it varied from standard conditions (e.g., the qualifications of the person administering the test, or the method of test administration) must be included in the evaluation report.

(d) Tests and other evaluation materials include those tailored to assess specific areas of educational need and not merely those that are designed to provide a single general intelligence quotient.

(e) Tests are selected and administered so as best to ensure that if a test is administered to a child with impaired sensory, manual, or speaking skills, the test results accurately reflect the child's aptitude or achievement level or whatever other factors the test purports to measure, rather than reflecting the child's impaired sensory, manual, or speaking skills (unless those skills are the factors the test purports to measure).

(f) No single procedure is used as the sole criterion for determining whether a child is a child with a disability and for determining an appropriate educational program for the child.

(g) The child is assessed in all areas related to the suspected disability, including, if appropriate, health, vision, hearing, social and emotional status, general intelligence, academic performance, communicative status, and motor abilities.

(h) In evaluating each child with a disability under Section 300.531-300.536, the evaluation is sufficiently comprehensive to identify all of the child's special education and related services needs, whether or not commonly linked to the disability category in which the child has been classified.

(i) The public agency use technically sound instruments that may assess the relative contribution of cognitive and behavioral factors, in addition to physical or developmental factors.

(j) The public agency uses assessment tools and strategies that provide relevant information that directly assists persons in determining the educational needs of the child.

Determination of eligibility (Section 300.534, 20 U.S.C 1414(b)(4) and (5), (c)(5)):

(a) Upon completing the administration of tests and other evaluation materials--

(1) A group of qualified professionals and the parent of the child must determine whether the child is a child with a disability, as defined in Section 300.7; and

(2) The public agency must provide a copy of the evaluation report and the documentation of determination of eligibility to the parent.

(B) A child may not be determined to be eligible under this part if--

(1) The determinant factor for that eligibility determination is--

(i) Lack of instruction in reading or math; or

(ii) Limited English proficiency; and

(2) The child does not otherwise meet the eligibility criteria under Section 300.7(a).

(c)(1) A public agency must evaluate a child with a disability in accordance with Section 300.532 and 300.533 before determining that the child is no longer a child with a disability.

(2) The evaluation described in paragraph (c)(1) of this section is not required before termination of student's eligibility under Part B of the Act due to graduation with a regular diploma, or exceeding the age eligibility for FAPE under State law.

Speech-language evaluation procedures:

The school environment places heavy demands on students to comprehend, interpret, and use all aspects of verbal and nonverbal communication. Students must be able to communicate with others who have different communication skills, styles, and backgrounds and for a variety of purposes and in different settings. They must be competent in listening, speaking, reading, and writing as they learn the curriculum and interact with others.

The speech-language pathologist focuses on all areas of communication -- fluency, voice, and language (oral and written), which includes articulation/phonology, morphology, syntax, semantics and pragmatics. In order to adequately evaluate these areas and each of their educational impacts, the SLP needs access to a variety of assessment tools, both formal and descriptive. Norm-referenced speech-language tests measure decontextualized communication skills using formalized procedures. They are designed to compare a particular student's performance against the performance of a group of students with the same age and other characteristics identified by the test author(s) in selecting the normative population. They are limited in assisting the SLP in describing particular characteristics of children as they engage in the process of communication. Further, meaningful comparisons between the student's performance and that of the test population are possible only when the test has clear administration, scoring criteria and validity, and when it is reliable and standardized on a sufficiently large and representative sample population (Paul, 1995, pages 37-38).

In contrast to standardized tests, descriptive measures of functional or adaptive communication, such as speech-language sampling, observations, interviews, play-based assessment, transdisciplinary assessment, curriculum-based assessment and criterion-referenced tests often provide a more realistic picture of how a student naturally uses his/her communication knowledge and abilities in everyday situations and the impact of speech-language impairments in those settings. For particular aspects of language such as voice, fluency, pragmatics and the comprehension and production of extended discourse, few formal tests are available. For certain populations, such as infants and toddlers with disabilities, children with severe disabilities or children whose English proficiency is limited, unbiased assessments can only be conducted with descriptive measures.

In conducting the speech-language evaluation, the SLP should:

1. Obtain background and current information from Child Find or the Child Study team (e.g., existing data, reports, records) and parents, and supplement this information with specific information on the student's communication needs in the classroom and other educational settings.

2. The SLP should collaborate with other professionals through a team assessment when the student is suspected of having cognitive, motor, visual, or hearing difficulties.

3. Interview the student, when appropriate, to determine his/her perception of communication abilities and difficulties, especially as related to classroom and other educational settings. Also, probe the student's awareness and use of strategies that he/she has attempted and probe for self-evaluation of their effectiveness.

4. Update audiometric and tympanometric screening or evaluation to rule out hearing loss as a contributing factor to speech and/or language problems. When hearing loss is suspected, the SLP should collaborate with an audiologist in further assessment and interpretation of findings relative to communication.

5. Examine oral-motor structure and function to rule out such problems as contributing factors to speech and/or language problems.

6. Conduct observation(s) of the student in the classroom and other educational settings. Obtain input from classroom teachers and others who are familiar with the student's daily communication.

7. Collect samples of communication behavior under structured and unstructured conditions using a variety of non-standardized formats.

8. Administer selected norm-referenced and/or criterion-referenced tests.

Appendix H lists examples of published developmental scales and norm-referenced tests that district SLPs may use during the assessment process. This list is not comprehensive as new tests are published regularly.

Considerations for evaluating students who are culturally and/or linguistically diverse are found on page 26.

Interpreting and reporting speech-language assessment results:

The following recommendations address the interpretation of speech-language assessment data and the reporting of the data to others:

1. In order to compare a student's formal test performance with that of the norming population, scores must be presented in an appropriate and consistent format. Standard scores, which are usually based on a mean of 100 and a standard deviation of 15 are recommended for this purpose. If norms are based on something other than a nationally represented normative sample, the test user should consider whether it is appropriate to report quantitative test results and, if so, to qualify findings as needed.

2. In determining eligibility as a student with a disability in the area of speech-language, it is recommended that 1.5 standard deviations (SD) below the population mean (approximately the 7th percentile) be used as the threshold level for establishing the presence of a disability. (See Appendix B) This cutoff should be applied to composite scores of receptive and/or expressive measures, or to overall test scores, rather than individual subtests. Eligibility should not be determined, however, solely by comparing a composite or overall score to this cutoff level. First, evidence that the deviation has an adverse affect on educational performance must be gathered and considered along with background information before a determination of eligibility can be made. Second, measurement error should be taken into account. Measurement error is reported in standardized test manuals or can be calculated using a formula (See Appendix C).

3. Test scores should be presented in a manner that conveys that some degree of error is inherent in the score, thereby discouraging the inappropriate interpretation that test scores are fixed and perfectly accurate representations of a student's functioning. A 90 percent confidence interval is recommended.

4. The type of psychometric information that is useful to professionals (e.g., standard scores, confidence intervals), should be supplemented by understandable interpretations to parents and teachers (e.g., low average, below average, average).

5. Modifications of standardized test procedures invalidate the use of test norms, but may provide qualitative information about the student's language abilities. In this case, test scores should not be interpreted in the usual fashion and the reason for invalidation should be clearly stated in oral and written presentation of test results [IDEA: 300.532(b)(2)].

6. Age or grade equivalent scores should not be used in making eligibility decisions. They do not account for normal variation around the test mean and the scale is not an equal interval scale, therefore the significance of delay at different ages is not the same. Further, the different ages of students within the same grade make comparisons between students within and between grades difficult. Grade equivalents do not relate to the curriculum content at that level.

7. Interpretations based on scores from two or more different tests should be approached with great caution. Different tests have different normative samples, different degrees of measurement error, and typically test different constructs. Apparent differences in scores from different tests may not represent real differences in behavior. Thus, it is important that the tester limit comparisons to tests with large, well-established national normative samples.

8. A test user faced with a request to evaluate a student whose special characteristics are not within his/her range of professional experience should seek consultation regarding test selection, necessary modifications of testing procedures, and score interpretation from a professional who has had relevant experience.

9. A student's score should not be accepted as a reflection of lack of ability with respect to the characteristics being tested for, without consideration of alternate explanations for the student's inability to perform on that test at that time.

Adverse affect on educational performance:
In order to be deemed a child with a speech-language disability, communication impairments must exert an "adverse affect on educational performance." (IDEA, 1999, Section 300.7(11) Educational performance refers to the student's ability to participate in the educational process, and must include consideration of the student's social, emotional, academic, and vocational performance.

Two issues pertaining to communication in educational settings should be considered in attempting to determine if a communication problem is an educationally disabling condition. The first involves the fact that language is the primary medium of education. To the extent that a student has not mastered the skills necessary to understand, express and use language, the student's access to the primary medium of education is limited. The second issue is that communication is the process through which education takes place. To the extent that a speech and language impairment affects the student's ability to participate in interactive communication with others in the educational setting, (including peers as well as adults), the student is prevented from participating in the process of education. Keeping in mind the interaction of the speech and language problems with both the medium and process of education will facilitate the consideration of an adverse affect on educational performance (Michigan Speech-Language-Hearing Association, 1995).

The definition of educational performance must not be limited solely to consideration of academic performance. The student does not need to be below grade level or failing in an academic area to be eligible as speech and language impaired. There are several types of oral and written communication problems that may prevent students from participating in classroom activities that require speaking and writing for a variety of purposes with individuals, in small groups, or in large academic and social settings. For example, a student who is disfluent may have difficulty contributing to class discussions or giving information orally. A student who does not have a fully repaired cleft palate may have

hypernasality, nasal air emission, and difficulty producing pressure consonants which interferes significantly with intelligibility.

The presence of any deviation in communication does not automatically constitute a disabling condition or constitute an adverse affect on the student's ability to function within the educational setting. The deviation in communication must be shown to interfere with the student's ability to perform in the educational setting before a speech-language disability is determined. Therefore, the affect on educational performance is best determined through classroom observation, consultation with classroom teachers and other special educators, and interviews with parents and the student. Teacher checklists are useful for determining specifically how the speech-language problems affect educational performance. (See page 35 for procedures for using checklists.)

The affect of the speech and language deviation on social/emotional or vocational performance must be carefully considered. The key issue to be determined is whether the deviation interferes with the student's ability to establish and maintain social relationships and experience sound emotional development. Careful documentation of limitations of social relationships and emotional development must be linked with the speech-language deviation to establish the existence of an adverse affect on educational performance. The IEP team members must collaborate to consider whether speech-language problems are linked with social, emotional and/or vocational development.

Decisions in Eligibility, Service Delivery, and Discontinuation of Speech-Language Services:

Determination of Eligibility:

SLPs are involved in the assessment, evaluation, and intervention of students with communication needs. Some students have speech-language disability as their primary and sole disability, whereas other students have speech-language needs concurrent with cognitive, perceptual-communicative disabilities, or other disabilities as defined by the Exceptional Children's Education Act (ECEA) rules. The ECEA definitions of children with disabilities are in Appendix A. Note that students who qualify as having speech-language as their primary disability by definition do not have significant cognitive, perceptual-communicative, or hearing disabilities. Measures of intellectual ability, achievement, and hearing status are obtained during assessment to rule out the presence of such disabilities.

As a general rule, students who have primary eligibility under disability categories other than speech-language should not also be eligible under speech-language disability if the communication problems are clearly the result of the primary disability. A secondary classification of speech-language disability might be made when communication problems are not related to the primary disability, such as motor-based articulation disorders, voice disorders, stuttering, or language. There may be instances where two or more disability conditions are determined for students. The SLP in collaboration with all team members should carefully review evaluation results to determine primary disability

and any secondary disabilities. For example, a student's evaluation profile indicates that a perceptual-communicative disability is causing significant difficulties with achievement in the areas of reading and writing. Language expression and comprehension are within the average range, but phonemic awareness skills are poor. Upon careful evaluation, the SLP determines that phonemic awareness is not part of a depressed language system, but is solely related to the reading disability. The team determines that PCD is the primary disability.

Determination of Intervention Services:

Communication is a developmental process that begins during infancy and continues throughout adulthood. It develops through interactions with caregivers, peers, and teachers and in home, social and academic settings. *Communication needs* change over time as individuals experience social and academic expectations. Therefore, all children benefit from focusing on communication, especially during the preschool and elementary school years. Some children have *speech-language needs* when their language systems are not developing on schedule. When such needs are suspected, the specific and unique skills of the speech-language pathologist are necessary to evaluate each child's language and provide appropriate interventions (Ehren, 2000).

In Colorado, students receive speech-language services when there is a demonstrated need:

a) student meets primary eligibility for speech-language disability;
b) student has a primary disability and a secondary speech-language disability; or
c) student has a primary disability which includes speech-language needs that require the expertise of the speech-language pathologist.

Note that comparisons of cognitive scores to language scores should not be the only way that speech-language needs are determined. Such comparisons do not provide:

a) a valid picture of student's potential for language improvement;
b) for the changing relationship between language quotients and cognitive quotients depending on assessment instruments used and the time span between assessments;
c) for the possibility that students make gains as a result of language intervention (Cole, 1996; Cole, Dale, & Mills, 1990; Mercer, 1993; Notari, Cole, & Mils, 1992).

Rather, a variety of factors relate to the communication and speech-language needs of students. Speech and language services should be determined based on the unmet speech-language needs of each student rather than on test scores (Casby, 1992). The 9 factors listed here will assist the IEP team in determining interventions that result in reasonable educational benefit (see page 21 for definition), access to the general education curriculum, and the least restrictive environment for the delivery of the IEP services.

1. History of general and special education standardized testing

a) standard deviation from the mean
b) evidence of growth through education
c) profile of strengths and needs

2. Educational growth
   a) rate of learning
   b) growth profile over time
3. Participation in the general education curriculum
4. Progress in the general education curriculum through classroom interventions
5. School history/attendance
6. Consistency of general and/or special education programming
7. Student motivation toward general and/or special education programming
8. Consistent use of general or special education supports
9. Student's attention during instruction

Once the primary disability and any secondary disabilities are determined, the IEP team determines each student's educational needs. When speech-language needs are among the educational needs of students, the SLP works with the IEP team members to develop goals and objectives. Table 4 (page 22) shows how speech-language services can be provided through several service delivery models. The SLP and IEP team members should collaborate to determine service delivery options including consultation, team teaching, a speech/language class for academic credit, etc. According to Ehren (2000) **"Other professionals must be willing to accept responsibility for the success of students with language needs in their respective classrooms." SLPs can provide direction and guidance to the classroom teacher and other educators in implementing language related IEP goals and objectives and provide technical assistance and professional development to educators.**

Cirrin (1996) suggests that speech-language intervention for some students can be provided as a related service (see definition below) to support IEP goals and objectives for classroom communication. Contextually based communication needs, opportunities, behaviors and environmental adaptations can be important intervention targets, especially for students with limited cognitive abilities. **The responsibility for meeting these needs should be shared among all instruction school personnel including the SLP.** Cirrin (1996) proposes six steps for Individual Education Planning teams:

a) form consensus about how to best address the student's communication needs;
b) analyze the student's learning environment;
c) prioritize two or three communication outcomes;
d) write IEP goals that are discipline free allowing maximum responsibility and participation from all instructional personnel;
e) ensure that communication goals and objectives are integrated throughout the student's day;
f) monitor progress of goals and objectives regularly and make changes as appropriate.

Definition of related service (IDEA, 1999, pp.23-24): *The term related services means transportation and such developmental, corrective, and other supportive services as are*

required to assist a child with a disability to benefit from special education, and includes speech-language pathology and audiology services, physical and occupational therapy, recreation, including therapeutic recreation, early identification and assessment of disabilities in children, counseling services, including rehabilitation counseling, orientation and mobility services, and medical services for diagnostic or evaluation purposes. The term also includes school health services, social work services in schools, and parent counseling and training.

It is the position of these guidelines that the ECEA rules be used to determine eligibility for speech-language, and other disabilities that involve speech and language. Speech-language disability should not be considered a secondary disability unless it is clearly apart from the primary disability. Collaboration between the school psychologist, the SLP, and others in planning and implementing appropriate communication and cognitive assessments and interpreting their results will facilitate decisions about eligibility. Speech-language services may be appropriate for students with speech-language needs, regardless of their disability category. The 9 factors listed on page 18-19 should be taken into account when speech and language services are being considered. The IEP team determines the most appropriate service delivery models to ensure least restrictive environment, access to the general education curriculum, and reasonable educational benefit.

Criteria for Discontinuation of Speech-Language Services:

Student progress toward meeting goals and objectives in speech-language services should be reviewed often. Some students will continue to have communication goals that are being addressed in their classrooms or other special education settings. Other students will have unmet speech and language goals and objectives and will continue receiving speech and language services. A group of students will have met their speech-language goals and objectives and have test scores that do not show the presence of a disability. Discontinuation of speech-language services is determined when the unique skills of the speech-language pathologist are no longer required to address the speech-language needs of the student.

1. The IEP team is responsible for determining the extent to which speech and language problems adversely affect educational performance. In the event that the speech-language problems do not produce such an affect, speech-language services should be discontinued (Asha, 2000).

2. Assessment and evaluation of speech and language abilities must show the presence of significant speech-language needs. When re-assessment and evaluation do not show the presence of significant speech-language needs, speech-language services should be discontinued. Assessment data and the completion of the communication scales should be used to make this decision.

3. The IEP team must determine that speech-language services provide reasonable educational benefit to each student. When it is determined that such benefit is not occurring, speech-language services should be discontinued or suspended until such time that reasonable benefit from services is determined (Asha, 2000). Reasonable educational benefit: "All services and educational placements under Part B must be individually determined in light of each child's unique abilities and needs, to reasonably promote the child's educational success." (IDEA Regulations, 1999, pp. 71) A lack of reasonable educational benefit is determined when students maintain a constant level of performance over a period of time in the presence of continued treatment using a variety of strategies (Asha, 2000).

4. Speech-language service delivery options and extent of services require careful consideration, so that students have access to the general education curriculum and that services are provided in the least restrictive environment. Speech-language services should be discontinued when the student no longer needs it to fully participate in the general education curriculum (Asha, 2000).

5. The following factors of students, both intrinsic and extrinsic, should be taken into consideration when determining discontinuation of speech-language services:

Intrinsic Factors:

- Capacity of student for change given the disability
- Presence of other disabilities; the student's communication needs are met by other services and service providers
- Progress of the student during the past year(s)
- Motivation of the student to participate in services
- Short and long-term communication needs
- Potential for regression if services are not maintained
- Medical or other conditions which lead to unstable performance

Extrinsic Factors:

- Environmental situations
- Bilingual family and/or classroom
- School history (e.g., poor attendance, several transfers, retention, suspension)
- Duration of services across time (e.g., months, years)
- Continuity of speech-language services
- Intensity of speech-language services
- Models and settings of speech-language service delivery
- Focus of speech-language services
- Student attendance in speech-language therapy

Table 4. Service Delivery Options.

Service delivery is a dynamic concept and changes as the needs of the students change.

No one service delivery model is to be used exclusively during intervention.

For all service delivery models, it is essential that time be made available in the weekly schedule for collaboration/consultation with parents, general educators, special educators and other service providers.

MONITOR: The speech-language pathologist sees the student for a specified amount of time per grading period to monitor or "check" on the student's speech and language skills. Often this model immediately precedes dismissal.

COLLABORATIVE CONSULTATION: The speech-language pathologist, regular and/or special education teacher(s), and patent/families work together to facilitate a student's communication and learning in educational environments. This is an indirect model in which the speech-language pathologist does not provide direct service to the student.

CLASSROOM BASED: This model is also known as integrated services, curriculum-based, transdisciplinary, interdisciplinary, or inclusive programming. There is an emphasis on the speech-language pathologist providing direct services to students within the classroom and other natural environments. Team teaching by the speech-language pathologist and the regular and/or special education teacher(s) is frequent with this model.

PULLOUT: Services are provided to students individually and/or in small groups within the speech-language resource room setting. Some speech-language pathologists may prefer to provide individual or small group services within the physical space of the classroom.

SELF-CONTAINED PROGRAM: The speech-language pathologist is the classroom teacher responsible for providing both academic/curriculum instruction and speech-language remediation.

COMMUNITY BASED: Communication services are provided to students within the home or community setting. Goals and objectives focus primarily on functional communication skills.

COMBINATION: The speech-language pathologist provides two or more service delivery options (e.g., provides individual or small group treatment on a pull-out basis twice a week to develop skills or preteach concepts and also works with the student within the classroom).

Sources: ASHA 2000

Case Examples of Eligibility, Service Delivery, and Discontinuation of Speech-Language Services:

Example #1

Stanley is a second grade student. His teacher reports that he is having difficulty learning concepts, is only beginning to grasp symbols such as letters and numbers, has below average language abilities including articulation, syntax, and vocabulary knowledge, and is immature socially. Stanley's WISC-R scores are verbal – 68, performance – 65, and full scale – 67. His scores on the Vineland Social Maturity Scale are 2 standard deviations below the mean. Stanley's receptive vocabulary standard score on the PPVT-III is 70, CELF is 80 on receptive and 82 on expressive composites. His articulation is in the 1st percentile and his rating was a 4 on the articulation scale . Intelligibility is of major concern. Language scores are higher than cognitive scores, yet they are greater than 1.5 standard deviations below the mean. Teacher input confirmed that his articulation and overall communication difficulties adversely affect educational performance.

Eligibility: Stanley meets primary eligibility as significantly limited intellectual capacity (SLIC).
Stanley meets secondary eligibility as speech-language disabled due to his very poor articulation and intelligibility.

Services: Stanley will receive special education programming in the special education classroom and support in the general education classroom. Stanley will receive direct speech-language services through a combination of service delivery models in either setting. Communication goals should be discipline-free allowing maximum responsibility and participation from all instruction personnel.

Discontinuation: Discontinuation of speech-language services occurs when communication goals/objectives are met or when criteria for discontinuation apply (See discontinuation criteria).

Example #2

Paul is in the 4th grade. His teacher reports that he is having difficulty with word meanings, completing tasks involving several directions, and is about two grade levels behind in reading comprehension and writing. Paul's verbal cognitive score is 79, performance score is 96, and full scale score is 85. He obtained a standard score of 75 on the Test of Word Knowledge and 2 standard deviations below the mean on the Token Test for Children. These scores confirm teacher reports. Paul received an overall rating of 3 on the language communication scale.

Eligibility: Paul meets primary eligibility for special education as a student with perceptual-communication disability (PCD)
He meets secondary eligibility as a student with a speech-language disability due to his poor semantics and verbal memory.

Services: General education placement with speech-language pathologist consultation with teacher.
Resource room services with consult by speech-language pathologist
Direct speech-language in either setting focusing on semantic development and short-term memory strategies for classroom learning
Classroom communication goals should be discipline-free allowing maximum responsibility and participation from all instructional personnel.

Discontinuation: Discontinuation of speech-language services occurs when communication goals/objectives are met or when criteria for discontinuation applies (See discontinuation criteria).

Example #3

Stephanie is a five-year-old preschool student who will be transitioning to Kindergarten in September. Stephanie was determined to be a preschooler with a disability when she was two and one-half years. She had fine and gross motor delays and moderate articulation delay. She received a rating of 3 on the articulation communication scale. Stephanie received services from an occupational therapist and from a speech-language pathologist during preschool. Her current testing and performance scores show mild articulation errors that are appropriate to her chronological age. Fine and gross motor performance is much improved but still below age expectations.

Eligibility: Not eligible as speech-language disability; Not eligible for OT services.

Services: No special education services.

Discontinuation: Completed

Example #4

Andrew currently is in the second grade. He was initially determined to be a preschooler with a disability. In his kindergarten year he was determined to have autism. Andrew is just beginning to use the PECS system to make choices between two food objects. His expressive and receptive language skills are estimated to be very low based on formal and informal observation in a variety of settings and through interviews with family members. Andrew was rated as a 4 on the functional communication scale.

Eligibility: Andrew meets primary eligibility under physical disability

He meets secondary eligibility under speech-language due to his severe and overall delay in communication.

Services: General education environment with close adult supervision
Special education classroom with close adult supervision
Direct speech-language in both settings focusing on the PECS as a means of communication
Communication goals should be discipline-free allowing maximum responsibility and participation from all instructional personnel.

Discontinuation: Discontinuation of speech-language services occurs when communication goals/objectives are met or when criteria for discontinuation applies (See discontinuation criteria)

Example #5

Larry is a fifth grade student (May) and will be a middle school student in September. The IEP team is determining transition issues for this student. Larry has been eligible and has received special education services under SLIC. He has a full scale score of 55. On the functional communication scale he was rated a 4. He has received speech-language services since preschool. Currently he makes his wants and needs known; he initiates conversation; he is easily understood by those who know him and he comments on objects and actions of others. He is able to read some words and can write his name. His functional communication rating is a 2 (Mild). He has met his communication goals to within his abilities and he has not shown additional progress for the past two years.

Eligibility: Eligible as a student with significantly limited intellectual capacity (SLIC). No longer eligible as speech-language disabled because he has improved to a rating score of 2, however, he still has communication needs

Services: Special education classroom with participation in the general education curriculum. Communication goals emphasized as part of curriculum. SLP provides ongoing consultation to classroom teacher and family.

Discontinuation: Discontinue direct speech-language services, but maintain consultative services (See discontinuation criteria).

Part III.

Assessing and Evaluating Students with Cultural and/or Linguistic Differences

The Colorado Department of Education published a guidebook in 1999 entitled Special education and culturally and linguistically diverse students: Meeting the challenges, realizing the opportunities. The document has detailed information on legislative and judicial mandates, referral of students to special education, guidelines for assessment and evaluation of culturally and linguistically diverse students (CLD) and the effective use of interpreters and translators in assessments, as well as numerous appendices and exhibits on these topics.

All of the information in this section, unless otherwise specified, is taken directly from the guidebook to inform SLPs about current issues and practices in the assessment, evaluation, and eligibility decisions for students who are CLD. SLPs are encouraged to obtain a copy of the complete guidebook on this topic.

Basic Principles underlying professional development:
As professionals who strive to meet the needs of students who are culturally and linguistically diverse and who may have a disability, we base our practices on the following principles:

1. We respect and honor the cultures and languages of all children and youth, and of their families.

2. We believe that what we learn about the languages and cultures of our students and their families challenges our thinking and enriches our lives personally and professionally.

3. We know that understanding and meeting the needs of the diverse learning community requires us to be life-long learners who participate in ongoing professional development.

4. We appreciate that the most important tools we have to understand and meet the needs of the diverse learning community are our knowledge, unique perspectives, and commitment to our students. Psychometric tests, teaching practices, and special programs are utilized best when we use our skills to tailor them to fit the unique needs of learners.

5. We are knowledgeable advocates, willing and skilled to help make changes in order for all learners to be successful. This is especially important in the case of CLD students who are at greatest risk of not meeting high standards if schools are not prepared to deal with differences in learning styles and behavior related to cultural and linguistic diversity.

6. We conduct assessments for the determination of special education eligibility which include:

- formal assessment only after careful consideration of the current situation and previous interventions
- a variety of information collected using various strategies and tools that reflect multiple perspectives of those who know the child; and
- careful consideration of each learner's cultural and linguistic background to determine appropriate uses from standardized tests and to arrive at meaningful and valid interpretation of results.

7. We make sound decisions aimed at helping each learner be successful. Decisions reflect:

- information that is gathered using non-biased, nondiscriminatory procedures and tools;
- decision making by teams composed of members with expertise in various disciplines including second language acquisition;
- respect for families in the decision making process for their children, and the provision of opportunities for family involvement in every step; and
- the use of carefully selected and trained interpreters, translators, and cultural mediators from the community.

8. We work collaboratively, focusing on the whole child, to meet each individual's needs and develop the special talents of every learner.

Recommendations for assessments:

The Individuals with Disabilities Education Act {614(b)(3)(A)} of 1997 makes it clear that tests and other evaluation materials used to assess a child must be selected and administered so as not to be discriminatory on a racial or cultural basis. Furthermore, they must be provided and administered in the child's native language or other mode of communication, unless it is clearly not feasible to do so. The IDEA states that "*In the case of a child with limited English proficiency, the IEP team shall consider the language needs of the child as such needs relate to the child's IEP.*" The new Colorado IEP form reflects these legal requirements.

To support the essential legal requirements, the following recommendations are helpful to ensure equity and appropriate services for students whose primary language is not English:

- Building-level pre-referral child study teams and special education staffing teams should be knowledgeable about:
  - -- the student's English language proficiency in all four skill areas (comprehension/listening, speaking, reading, and writing):
  - -- second language acquisition patterns;
  - -- challenges faced by children whose primary language is not English;
  - -- effective educational strategies for these students (including alternative language program services as part of pre-referral interventions); and

-- the student's language background and educational history.

- Child Find, Child Study and special education staffing teams should have resources available to help overcome language obstacles for parents whose primary language is not English.

- Special education staffing teams should be aware of the ethnic/linguistic distribution of students in their districts and buildings in order to compare that information to the distribution of students by ethnicity and language who are in special education. This will allow them to monitor possible over- or under-representation in special education of students whose primary language is not English.

- Although helpful for most English-speaking students, the formal use of standardized tests in English and reporting of the scores to determine eligibility is **not** recommended for students whose primary or home language is other than English. Placement decisions for these students should reflect an emphasis on clinical judgment utilizing informal tools and strategies to obtain information.

- More reliable sources of information about current levels of functioning than norm referenced data for many students with limited English proficiency include observation of student performance on specific tasks in classroom, social, and testing situations; interviews with the student, family, and teachers; and examination of student work samples.

- When a student has some educational experience in English and a history of speaking another language, it is best to assess the student in both languages to obtain a more accurate picture of how the student is functioning. If students are assessed in languages in which they are not proficient, such testing should be treated as additional, informal information; special education placement should not be based on the results of such testing.

- Special education services for students with limited English proficiency should be provided by someone knowledgeable about second language acquisition and cultural differences.

<u>Assessing Speech and Language Functioning: Language Difference or Disability?</u>

To determine whether a student with limited proficiency in English has a speech/language disability, differentiating a language disability from a cultural or language difference is crucial. In order to conclude that a student with limited English proficiency has a language disability, the assessor must rule out the effects of different factors that may simulate language disabilities.

No matter how proficient a student is in his or her primary or home language, if cognitively challenging native language instruction has not been continued, a regression

in primary or home language abilities is likely to have occurred. Students may exhibit a decrease in primary language proficiency through:

- inability to understand and express academic concepts due to the lack of academic instruction in the primary language;
- simplification of complex grammatical constructions;
- replacement of grammatical forms and word meanings in the primary language by those in English; and
- the convergence of separate forms or meanings in the primary language and English. (Rice and Ortiz, 1994)

These language differences may result in a referral to special education because they do not fit the standard for either language--even though they are not the result of a disability. The assessor also must keep in mind that the loss of primary or home language competency impacts the student's communicative development in English.

The student's competence in his or her primary or home language may be interfering with the correct use of English. Culturally and linguistically diverse students in the process of acquiring English often use word order common to their primary or home language (e.g., noun-adjective instead of adjective-noun). **This is a natural occurrence in the process of second language acquisition and not a disability.** Furthermore, students may "code-switch" using words and/or patterns modeled in their homes or communities. The ability to code-switch, while often misinterpreted as evidence of poorly-developed language competence, is common among competent, fluent bilingual speakers and may not necessarily indicate the presence of a disability.

Experience shows that students learn a second language in much the same way as they learned their first language. Starting from a silent or receptive stage, if the student is provided with comprehensible input and opportunities to use the new language, s/he will advance to more complex stages of language use (see Exhibit 6).

Cummins (1984) suggests that it takes a student, on average, one to two years to acquire basic interpersonal communicative skills (BICS)--the level of language needed for basic face-to-face conversation. This level of language use is not cognitively demanding and is highly context-embedded. On the other hand, cognitive academic language proficiency (CALP), the level of language needed for complex, cognitive tasks, usually takes on average five to seven years or more to acquire. This level of language functioning is needed to be successful in an English classroom where language is context-reduced and cognitively more challenging. If a student appears to be "stuck" in an early language development stage, this may indicate a processing problem and further investigation is warranted. Exhibit 7 summarizes the developmental stages in the acquisition of a second language.

Exhibit 6

Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP)

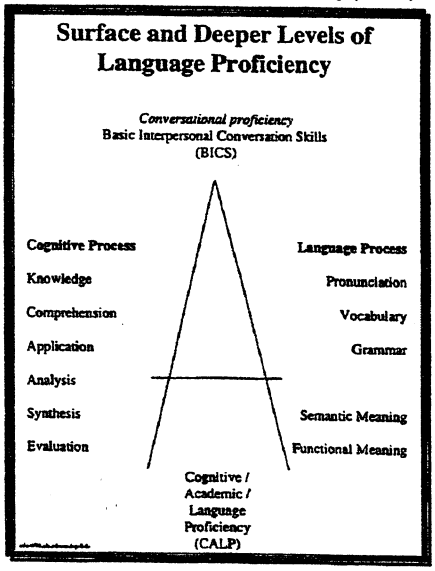


Exhibit 7

Stages of Second Language Acquisition

Developmental Stage	Characteristics
Silent/Receptive Basic Interpersonal Communication Skills (BICS)	• hesitant, often confused and unsure • limited comprehension, that is, indicated nonverbally through gestures and actions • student begins to associate sound and meaning in the new language • student begins to develop listening skills
Early Production Basic Interpersonal Communication Skills (BICS)	• yes/no responses • one word verbal responses advancing to groupings of two or three words • focus is on key words and contextual clues • improving comprehension skills • relates words to environment
Speech Emergence Basic Interpersonal Communication Skills (BICS)	• transition from short phrases to simple sentences • errors of omission and in grammar • continuing mispronunciations
Intermediate Fluency Basic Interpersonal Communication Skills (BICS)	• transition to more complex sentences • students engage in conversation and produce connected vocabulary • errors more common as student uses language for more purposes • grammar not firmly acquired • extensive vocabulary development
Advanced Fluency Basic Interpersonal Conversational Skills (BICS) transitioning to Cognitive Academic Language Proficiency (CALP)	• student can interact extensively with native speakers • student has higher levels of comprehension, though not advanced enough for cognitively-challenging academic tasks • few errors in grammar

(Adapted from Project Talk: A Title VII Academic Excellence Program, Aurora Public Schools)

In addition to understanding the second language learning process and the impact that first language competence and proficiency has on the second language, the assessor must be aware of the type of alternative language program that the student is receiving. Questions should be considered such as: Has the effectiveness of the English instruction been documented? Was instruction delivered using ESL methodologies or was it received through regular classroom instruction? Is the program meeting the student's language development needs? The answers to these questions will help the assessor determine if the language difficulty is due to inadequate language instruction or the presence of a disability.

Speech/Language Assessment Guidelines for Students who are CLD:

Accurate descriptions of a student's communicative competence in **both languages** are essential for determining if a perceived problem or difficulty in English is a true language disability. Students who are able to communicate normally in their primary or home language **do not** have a language disability. Evidence of language difficulties only in the student's second language is an indication of a language difference, not a disability. Determination of a language disability requires documentation of an intrinsic communication problem in **both** languages, except in cases where the student is so new to English that the student can only be assessed in his or her primary or home language. When assessing a student for speech/language disabilities, it is important to review the student's audiological history, in addition to considering the following:

- **Syntax and Morphology** - Syntactical and morphological errors are common in the speech of students learning a second language and usually do not indicate a language disability. A language sample is an appropriate tool to document and determine progress in English, the development of syntax (grammar), and morphological (sound units) development. Language samples that indicate growth in English language development are evidence that the errors experienced are part of the normal language acquisition process and not evidence of a language disability. Language samples should be taken over time and in variety of settings. When working with second language learners, extra care must be taken to ensure that culturally appropriate tasks are used for the language samples.

- **Pragmatics** - To avoid bias, the functional use of language must be evaluated in relation to the student's culture. The assessor must obtain a complete language history and a description of the student's effectiveness as a communicator in the home and community. As mentioned earlier, interviews with parents or caretakers will provide insights into the student's ability to communicate effectively in a natural setting. However, before meeting with parents, the assessor should confer with someone familiar with the student's culture in order to gather culturally relevant information on language use. If no one is available, research the family's culture and be aware that in some cultures a quiet child is ideal and parents do not encourage their children to speak or engage in verbal play. Remember, if the information collected does not indicate a problem outside of the school setting, it is possible that a student's difficulty lies in using language in a more academically-oriented context.

- **Voice Disorders** - Normal voice characteristics from a student's primary language may be confused with a voice disability. It is essential that students suspected of having a voice disorder be assessed in their primary or home language. A voice disorder is present only if the quality, pitch, or intensity of the primary language results in reduced intelligibility, or is aesthetically unpleasant to speakers of that language and dialect.

- **Fluency Disorders** - Hesitations, word repetitions, slower response time, and false starts are all normal in the second language learning process. Therefore, the student should be assessed in his or her primary or home language to determine if fluency disabilities are present. Collecting a family history and identifying the age of onset for any fluency disability will provide important information needed to determine the severity of the disability. However, care must be taken in interpreting the results of the primary or home language abilities and fluency may occur, especially if the student has limited need or few opportunities to communicate in that language.

- **Phonology: Articulation/Auditory Discrimination** - Phonetic differences between the student's home language and English may interfere with the acquisition of sounds in English. Therefore, some students may have difficulty pronouncing and/or discriminating certain consonants, clusters, or other sound combinations unique to English. Students who exhibit difficulties pronouncing--or discriminating--some English sounds should be evaluated in their primary or home language. An articulation or auditory discrimination problem is present only if delayed phonological development is evident in the student's primary or home language.

Clearly, assessment processes in the speech/language area must be designed to provide detailed descriptions of the student's ability to use their primary or home language in addition to English. Langdon (1989) proposed a model speech and language assessment protocol for students with limited English proficiency as found in Exhibit 8.

Exhibit 8

A Model Speech and Language Assessment Protocol for Students who are CLD

Testing:

- Description of discrete-point tests in both languages; language samples taken in different contexts (i.e., explaining rules of games, retelling stories), and interacting with a variety of people; complete assessment of language proficiency in each language and where testing and language samples were done; description of observation and the settings in which it was done.

Discussion:

- Language Proficiency: Comparisons between languages in different areas; which areas are stronger in each language; the influence of the student's experiences in each language; impact on academic performance; the degree and impact of primary or secondary language loss.
- Language Development: Status of BICS and CALP in each language and the status when English was introduced; breaks in language exposure; integration of language data with intellectual and academic data; comparison of the student with peers who have similar linguistic and school-based experiences.
- Language Samples: Transcribed excerpts in both languages; descriptions of contexts where these were taken; fluency variables (pauses, hesitations, and repetitions); pragmatic skills (turn-taking and staying on topic); code switching patterns; dialect; articulation; grammar, and complexity of sentences; voice quality and resonance; status of oral peripheral mechanism.
- Behaviors: Observations on one-to-one interactions across contexts.
- Eligibility: Rationale for determining eligibility or noneligibility for special education, using the Colorado Severity Rating Scale and the eligibility criteria on the student IEP.

Goals and Objectives:

- School Based: How each is linguistically appropriate; in which language the intervention should take place; reason for referral; suggestions for teachers.
- Home Based: Summarize these to parents personally or, if appropriate, in a letter in the primary language; specific suggestions for helping the student at home.

The following ideas for speech and language specialists provide information on how to use standardized tests to obtain qualitative information about a student's language functioning. This is not meant to be an inclusive list; but it simply offers a few ideas to demonstrate innovative ways to use tests that usually are administrated in a controlled, standardized manner. Since test scores are not used, the key is to clearly report how the tests were used and how the student responded using the report to support conclusions drawn by the examiner.

- If there are three or four prompts, cover all but the two most different and see how the student does with fewer and very clear choices. This will help to ascertain whether the student grasps the concept being assessed.
- Look for patterns in the errors made by the student. Does s/he know the answer if it is a verb, but not a noun? Are they using in-class errors or randomly giving names? Teasing out the error pattern can give information about whether the mistakes are due to a learning gap or a processing difficulty.
- Record the student's use of foreign words during the testing. If you do not know what the words mean, ask someone knowledgeable in the language. You may learn that the student knows the answer in his or her primary or home language but not in English.
- Look for cultural explanations to explain the student's answer. For example, a student may not be able to answer questions related to cold weather activities if s/he comes from a tropical area.
- Ask yourself what tasks the classroom demands and how you can use the tests you are familiar with to observe the student's performance on similar tasks. Then teach

the student how to perform the tasks, using items from the test and observe how quickly and easily the student is able to learn and perform the tasks.

- Be generous in considering whether a student has answered a question correctly. Do not count grammatical mistakes as wrong answers. (In fact, measures of grammatical usage probably are not good to use to determine a disability.) If the student has the gist of the question but cannot explain the answer succinctly, count the answer as correct.

Assessors must understand the process of second language learning and the characteristics exhibited by second language learners at each stage of language development if they are to distinguish between language differences and language disabilities. The model assessment protocols presented in this document provide relevant data on the student's primary or home language and English language development through a combination of anecdotal and performance measures, in addition to standardized language proficiency assessments. This combination of data should assist the clinician in making more accurate diagnostic judgments. **Only after documenting problematic behaviors in the primary or home language and in English, and eliminating extrinsic variables as the cause of these problems, should the possibility of the presence of a language/learning disability by considered** (Rice and Ortiz, 1994).

Appendix G includes developmental and normative data on the speech and language characteristics of culturally and linguistic diverse populations.

Part IV.

Communication Scales as a Tool in the Determination of Eligibility for Speech-Language Services

The communication scales are designed for SLPs and to be used after completing an assessment and evaluation of students in preschool (age 3 to 5 years) and in elementary, middle, and high school. **The scales are not recommended for use when the assessment and evaluation is of children in the birth to 3 year age range.** Further, SLPs should exercise professional judgment for its use with the preschool population, particularly when assessment information is solely collected using informal procedures.

When a child has a communication impairment, such as in fluency, articulation/phonology, voice, or language that adversely affects his or her educational performance and, as a result, needs special education and related services, that child is considered to have a disability under IDEA. Refer to Appendix A for the definition of speech-language disability.

Communication Rating Scales:
The communication rating scales are to be used as a tool after a complete assessment of the student's communication abilities and after the SLP has interpreted assessment results. The tool is designed to allow SLPs to document the presence of assessment findings according to the intensity of those findings and to then make a determination, based on the assessment results of eligibility for speech-language disability and services. The tool is not a diagnostic instrument. The scales must not be used in the absence of assessment data.

The following definitions are included to accompany the communication rating scale:

"*A language impairment* is impaired comprehension and/or use of spoken, written, and/or other symbol systems. "The disorder may involve (1) the form of language (phonology, morphology, syntax), (2) the content of language (semantics), and/or (3) the function of language in communication (pragmatics) in any combination" (ASHA, 1993, p. 40). A language impairment does not exist when (1) language performance is appropriate to normal development, (2) language differences are primarily due to environmental, cultural or economic factors including non-standard English and regional dialect, (3) language performance does not interfere with educational performance.

An *articulation impairment* is the "atypical production of speech sounds... that may interfere with intelligibility" (ASHA, 1993, p. 40). Errors in sound production are generally classified as motor-based or cognitive/linguistic-based (Bernthal and Bankson, 1988). Motor-based errors are generally called articulation impairments; cognitive/linguistic-based errors are referred to as impairments of phonological processes. While some practitioners classify phonological process errors as language

impairments, for purposes of these guidelines they are included, along with articulation impairments under the category of phonology. An articulation impairment does not exist when: (1) sound errors are consistent with normal articulation development, (2) articulation differences are due primarily to unfamiliarity with the English language, dialectal differences, temporary physical disabilities or environmental, cultural or economic factors, (3) the errors do not interfere with educational performance.

A *fluency impairment* is defined as "an interruption in the flow of speaking, characterized by atypical rate, rhythm, and repetitions in sounds, syllables, words, and phrases. This may be accompanied by excessive tension, struggle behavior, and secondary mannerisms" (ASHA, 1993, p.40). A fluency impairment does not exist when (1) dysfluencies are part of normal speech development, (2) dysfluencies do not interfere with educational performance.

A *voice impairment* is the abnormal production and/or absence of vocal quality, pitch, loudness, resonance, and/or duration which is inappropriate for an individual's age and/or gender (ASHA, 993, p.40). A voice impairment does not exist when vocal characteristics (1) are the result of temporary physical factors, such as allergies, colds, enlarged tonsils and/or adenoids, or short term vocal misuse or abuse, (2) are the result of regional, dialetic or cultural differences, (3) do not interfere with educational performance. The American Speech-Language-Hearing Association (ASHA) recommends that individuals receive a medical examination and medical clearance from contraindicating physical problems prior to participating in voice therapy.

Procedures for using the communication scales:

1. Prior to or during the speech-language assessment, provide and then collect the teacher checklists appropriate to each student's communication needs. The checklists accompany each of the communication scales. The checklists will assist the SLP in selecting and administering relevant assessment tools and verifying that the communication problem has an adverse affect on educational performance.

2. When standardized tests are used, the threshold for determining disability is 1.5 standard deviations below the mean of the test. The threshold for determining disability based on other procedures will vary according to the procedures selected.

3. Use the communication scales matrix to rate the student's communication in all areas determined necessary. Identify and circle the scores in each row of the scale. Since scores in each row contribute to the total score, it is necessary to determine a score for each row. Note also that the scores within rows (e.g., sound production, stimulability, intelligibility, oral motor and/or motor sequencing, and adverse affect on educational performance) are weighted in accordance to its importance in the determination of disability. Do not alter these weighted scores by using half or other full points. For example, do not score intelligibility as a "7" or stimulability as a "2.5."

4. Add the scores from each row to obtain the **Total Score (TS)** and assign the **Overall Rating (OR)** of 1, 2, 3, or 4 to the scale that corresponds to normal, mild, moderate, or severe.

5. When more than one rating scale is used for a student, all the ORs should be used to determine a single rating as follows:

One or more ratings of 1 =	1
One or more ratings of 2 =	2
One rating of 3 =	3
Two or more ratings of 3 =	4
One or more rating of 4 =	4

6. The OR rating is used to determine eligibility for speech-language services.
   Ratings of 1 or 2: No disability present; Student not eligible
   Ratings of 3 or 4: Disability is present; Student is eligible

7. OR ratings of 3 or 4 warrant speech-language services. The model of service delivery should be based on the needs of the student, ensuring the least restrictive environment, access to the general education curriculum, and reasonable educational benefit from services.

Variance in Determining the Overall Rating

After the OR has been determined, the SLP may use professional judgment to add or subtract one rating point when one or more of the 9 factors listed on page 18-19 are present. The use of the variance should be considered only during the eligibility meeting so that all team members are able to discuss the factors involved. Document the factors and the rating on the "determination of eligibility" form of the IEP document.

Instructions for completing the communication scales

ARTICULATION SCALE

1. Circle the appropriate scores for each of the five categories: sound production, stimulability, intelligibility, oral motor function and adverse affect on educational performance.

2. Determination of the rating for formal assessments should be based on derived scores of relative standing, such as standard scores or percentiles. The normal curve and derived scores of relative standing are in Appendix C.

3. When a dialect or other language influence is observed, a comparative analysis of such differences is necessary prior to using the rating system. (See Appendix G)

4. Stimulability is rated based on formal and informal observation of the student's ability to produce speech sounds in the context of syllables and words.

5. Determination of intelligibility is based on objective measures. The Percentage of Consonants Correct procedure is recommended. Instructions for calculating the PCC and a tally form are included.

6. Decisions about the impact of oral motor functioning requires professional judgment from observations made during oral motor examinations and performance of diadochokinetic rates. Normative data for diadochokinetic rates is in Appendix E.

7. Use the Teacher Input Form regarding articulation to assess the adverse affect on educational performance.

8. Circle the score for each row and add them to obtain the Total Score (TS).

Total Score:	0-9	no disability	Rating 1
Total Score:	10-16	mild	Rating 2
Total Score:	17-24	moderate	Rating 3
Total Score:	25-26	severe	Rating 4

9. The comment section may include statements regarding discrepancies among individual tests, subtests, classroom performance and other factors that are relevant to the determination of severity.

STUDENT:_____ DATE:_____
SCHOOL:_____ SLP:_____

ARTICULATION RATING SCALE

	No Disability (1)	Mild (2)	Moderate (3)	Severe (4)
SOUND PRODUCTION	Score = 0 No sound errors/ phonological processes; errors consistent with normal development (SD = 0-.99) 50%	Score = 2 Speech contains sound errors/ phonological processes 6 mos.- 1 yr. below age (SD = 1.0 - 1.49) 16%ile	Score = 3 Speech contains sound errors/ phonological processes 1 - 2 yrs. below age (SD = 1.5 - 1.99) 7%ile	Score = 4 Speech contains sound errors or phonological processes > than 2 yrs. below age (SD = > 2.0) 2%ile
STIMULABILITY	Score = 0 Errors stimulable in several contexts	Score = 2 Errors stimulable in at least one context	Score = 3 Although not correct, errors approximate correct production	Score = 4 Most errors not stimulable for correct production
INTELLIGIBILITY	Score = 0 Connected speech intelligible; and/or PCC is 100 - 95%	Score = 4 Connected speech intelligible but errors are noticeable; and/or PCC is 94-85%	Score = 6 Connected speech substantially unintelligible, when context is unknown; and/or PCC is 84-51%	Score = 8 Connected speech mostly unintelligible, gestures/cues needed; and/or PCC is <50%
ORAL MOTOR AND/OR MOTOR SEQUENCING	Score = 0 Oral motor and/or sequencing adequate for speech production	Score = 2 Oral motor and/or sequencing difficulties are minimal a do not contribute to speech production problems	Score = 3 Oral motor and/or sequencing difficulties interfere with speech production	Score = 4 Oral motor and/or sequencing greatly interferes with speech production; use of cues, gestures, AT needed
ADVERSE AFFECT ON EDUCATIONAL PERFORMANCE Social Emotional Academic Vocational	Score = 0 Articulation does not interfere	Score = 4 Articulation minimally impacts the student's participation	Score = 6 Articulation interferes with student's participation	Score = 8 Articulation seriously limits participation
Total Score	0 2 3 4 5 6 7 8 9	10 11 12 13 14 15 16	17 18 19 20 21 22 23 24	25 26 27 28
Final Rating	(1) No Disability	(2) Mild Disability	(3) Moderate Disability	(4) Severe Disability

COMMENTS:

RULES FOR OBTAINING THE PERCENTAGE OF CONSONANTS CORRECT (PCC)

The Percentage of Consonants Correct (PCC) is a procedure for tallying the correct and incorrect use of consonants in words and then determining the percentage of consonants that are used correctly. The percentage is an estimate of intelligibility that corresponds to severity categories ranging from normal to severe/profound. The PCC can be accomplished after formal articulation tests are administered or language samples are obtained provided that all words are transcribed.

I. Sampling Rules

A. Consider only intended (target) consonants in words. Intended vowels are not considered.

1. Addition of a consonant before a vowel, for example, *on* [hon], is not scored because the target sound /o/ is a vowel.
2. Postvocalic /r/ in fair [feir] is a consonant, but both stressed and unstressed vocalic /ɚ/, as in *furrier* are vowels.

B. Do not score target consonants in the second or successive repetitions of a syllable, for example, *ba-balloon* - score only the first /b/.

C. Do not score target consonants in words that are completely or partially unintelligible or whose gloss is highly questionable. (A gloss is the clinician's repetition of what the child said for transcribing purposes.)

D. Do not score target consonants in the third of successive repetitions of adjacent words unless articulation changes. For example, the consonants in only the first two words of the series [kaet], [kaet], [kaet] are counted. However, the consonants in all three words are counted if the series were [kaet], [kaek], [kaet].

II. Scoring Rules

A. The following six types of consonant sound changes are scored as incorrect:

1. Deletions of a target consonant.
2. Substitutions of another sound for a target consonant, including replacement by a glottal stop or a cognate.
3. Partial voicing of initial target consonants.
4. Distortions of a target sound, no matter how subtle.
5. Addition of a sound to a correct or incorrect target consonant, for example, *cars* said as [karks].
6. Initial /h/ deletion (*he* [i] and final substitutions (*ring* [rin] are counted as errors only when they occur in stressed syllables; in unstressed syllables they are counted as correct, for example *feed her* [fider]; *running* [rʌnIn].

B. Observe the following:

1. The response definition for children who obviously have speech errors is "score as incorrect unless heard as correct." This response definition assigns questionable speech behaviors to an "incorrect" category.
2. Dialectal variants should be glossed as intended in the child's dialect, for example, *picture* 'piture," *ask*, "aks," and so on.

3. Fast or casual speech sound changes should be glossed as the child intended, for example, *don't know* "dono," and "n," and the like.
    a. Allophones should be scored as correct.

III. Calculation of Percentage of Consonants Correct (PCC)

$$PCC = \frac{\text{Number of correct consonants}}{\text{Number of correct plus incorrect consonants}} \times 100$$

Quantitative estimates of severity such as the PCC provide the clinician with an objective means for determining the relative priority of those who may need intervention

The following percentages correspond to severity categories:

%100 - 85	Normal/Mild
% 85 – 65	Moderate
% 65 – 50	Severe
% 50 - >	Profound

Adapted from Bernthal and Bankson (1998). Articulation and phonological disorders (4th ed.). Needham Heights, MA: Allyn & Bacon.

TALLY FORM FOR DETERMINING PERCENTAGE OF CONSONANTS CORRECT

Student Name:_____ C.A.:_____ Grade:_____

		RELEASING POSITION	ARRESTING POSITION	CONSONANT CLUSTERS	TOTAL CORRECT AND TOTAL (TC/T)
Nasals	n				
	m				
	ŋ				
Stops	b				
	p				
	t				
	d				
	k				
	g				
Fricatives	f				
	v				
	θ				
	ð				
	s				
	z				
	ʃ				
	ʒ				
	h				
Affricates	tʃ				
	dʒ				
Glides	w				
	r				
	hw				
	j				
	l				

Total number of consonants correct (TC) = _____ (a)
Total number of consonants correct + incorrect (T) = _____ (b)
(a) divided by (b) = _____ X 100 = PCC _____

Normal/Mild = 100-85%
Mild/Moderate = 85-65%
Moderate/Severe = 65-50%
Severe = below 50%

TEACHER INPUT - ARTICULATION

Student:_____ **Birth date:**_____
Teacher:_____ **Grade/Program:**_____

Your observations of the above student's speech will help determine if there is an articulation problem which is adversely affecting educational performance. Check all items that have been observed. Please return the completed form to the Speech-Language Pathologist.

	Yes	No
1. Is this student's intelligibility reduced to the extent that you find it difficult to understand him/her? A) Occasional words are difficult to understand ___ B) Many words are difficult to understand ___ C) Words are often difficult to understand ___	___	___
2. Does this student appear frustrated or embarrassed because of his/her articulation errors?	___	___
3. Does the speech problem distract listeners from what the student is saying?	___	___
4. Has the student shown concern about his/her articulation errors?	___	___
5. Is the student have difficulty discriminating sounds or words from each other?	___	___
6. Does the student self-correct articulation errors?	___	___
7. Does the student have awareness of sounds in words and is able to rhyme, segment, and manipulate sounds in words?	___	___
8. Does the student have particular patterns of errors that suggest difficulty with rule learning (e.g., deleting beginning or ending consonants, deleting part of all of blends, exchanging the "r," "l," "w," and "y" sounds in words)?	___	___
9. Does the student mispronounce during reading of words containing error sounds?	___	___
10. Does the student have reading problems because of articulation errors?	___	___
11. Does the student make spelling errors on the same sound symbols that verbal articulation errors occur?	___	___
12. Does the student avoid speaking in class or in other situations because of his/her articulation errors?	___	___

It is my opinion that these behaviors:
Do not adversely affect educational performance ___
Do affect educational performance ___

Do you have any other observations relating to the communication skills of this student?

_____

_____

Teacher Signature:_____ Date:_____

Adapted from Standards for the delivery of speech-language services in Michigan public schools, Michigan Speech-Language-Hearing Association (1995).

LANGUAGE RATING SCALE

1. Circle the appropriate scores for each of the three categories: formal assessment, informal assessment/language sample and adverse affect on educational performance. The worksheet can be used to summarize assessment data.

2. Determination of the rating for formal assessments should be based on derived scores of relative standing, such as standard scores or percentiles. The normal curve and derived scores of relative standing are in Appendix C.

3. Determination of the rating for informal assessment requires professional judgment and reference to normative data. Consider the results of language samples, teacher-made tests, observation, etc.

4. When dialect or other language influence is observed, complete a comparative analysis of such differences prior to applying the rating system. (See Appendix G)

5. Use the Teacher Input Form regarding language to assess the adverse affect on educational performance.

6. Circle the score for each row and add them to obtain the Total Score (TS).

Total Score:	0-6	non disabled	Rating 1
Total Score:	7-9	mild	Rating 2
Total Score:	10-13	moderate	Rating 3
Total Score:	14-16	severe	Rating 4

7. The comment section may include statements regarding discrepancies among individual tests, subtests, classroom performance and other factors that are relevant to the determination of severity.

S ENT:_____ DATE:_____
S OL: _____ SLP:_____

LANGUAGE RATING SCALE

	No Disability (1)	Mild (2)	Moderate (3)	Severe (4)
FORMAL ASSESSMENT IN ORAL AND/OR WRITTEN LANGUAGE	Score = 0 SS 100 – 86 50%ile SD 0 -.99 below the mean on tests of: (check those that apply*) auditory skills form/structure content/semantics use/pragmatics metalinguistics	Score = 2 SS 85 – 78 16%ile SD 1.0 - 1.49 below the mean on tests of: (check those that apply*) auditory skills form/structure content/semantics use/pragmatics metalinguistics	Score = 3 SS 77 – 69 7%ile SD 1.5 – 1.99 below the mean on tests of: (check those that apply*) auditory skills form/structure content/semantics use/pragmatics metalinguistics	Score = 4 SS 68 – 55 2%ile SD 2.0 - > below the mean on tests of: (check those that apply*) auditory skills form/structure content/semantics use/pragmatics metalinguistics
INFORMAL ASSESSMENT OR LANGUAGE SAMPLE IN ORAL AND/OR WRITTEN LANGUAGE	Score = 0 Language skills are developmentally appropriate and do not interfere with communication	Score = 2 Language skills consist of some errors, and do not interfere with communication	Score = 3 Language skills are below the average range; errors are noticeable and interfere with communication	Score = 4 Language skills are signficantly below average; errors are prevalent and greatly interfere with communication
ADVERSE AFFECT ON EDUCATIONAL PERFORMANCE	Score = 0 Language skills are adequate for the student's participation in educational settings	Score = 4 Language skills are developing and can be addressed in the general educational setting	Score = 6 Language skills have an affect on the student's ability to participate in educational settings	Score = 8 Language skills have a significant impact on the student's ability to participate in educational settings
Total Score	0 2 3 4 5 6	7 8 9	10 11 12 13	14 15 16
Final Rating	(1) No Disability	(2) Mild Disability	(3) Moderate Disability	(4) Severe Disability

COMMENTS:

WORKSHEET FOR LANGUAGE CHARACTERISTICS

The purpose of this worksheet is to assist SLPs in considering the many aspects under each of the language categories. Check all the characteristics that apply after assessment and evaluation of student data.

	Yes	No
Auditory Skills:		
auditory attention		
auditory memory		
auditory discrimination		
Form/Structure (Oral and Written):		
grammar		
morphology		
sentence length		
sentence complexity		
variety of genres		
cohesion		
spelling		
Content/Semantics		
vocabulary		
concepts		
classification/categorization		
semantic relationships		
comprehension of questions		
following directions		
understanding stories and text		
word finding/retrieval		
semantic appropriateness		
Use/Pragmatics		
variety of verbal and nonverbal functions		
discourse rules		
prosodic features		
uses context to shift registers		
style of writing appropriate to intent		
Metalinguistics		
phonemic and phonological awareness		
error awareness/correction		
figurative language		
using language to think and problem solve		

TEACHER INPUT - LANGUAGE

Student:_____ **Birth date:**_____

Teacher:_____ **Grade/Program:**_____

Your observations of the above student's language will help determine if a language problem adversely affects educational performance. Check all items that have been observed. Please return completed form to the Speech-Language Pathologist.

	Yes	No
1. Does the student speak in complete sentences?	___	___
2. Do sentences contain word combinations and complexity appropriate to the student's age/grade?	___	___
3. Does the student use grammar appropriate to age/grade? (e.g., verb tense, pronouns, plurals, negatives)	___	___
4. Does the student ask Wh questions?	___	___
5. Does the student use vocabulary appropriate to age/grade?	___	___
6. Does the student use language appropriately in the context of social situations?	___	___
7. Does the student express him/herself effectively (e.g., organized, sequential thoughts)?	___	___
8. Does the student contribute to class discussions?	___	___
9. Does the student initiate and maintain conversations?	___	___
10. Does the student follow oral directions without repetitions?	___	___
11. Does the student listen to stories and interpret meanings?	___	___
12. Does the student understand new concepts taught?	___	___
13. Does the student retain new information?	___	___
14. Does the student remember and recall old and new information?	___	___
15. Does the student use verbal skills to solve problems?	___	___
16. Does the student understand figurative language (e.g., humor, idioms, proverbs) appropriate to age/grade?	___	___
17. Does the student comprehend Wh and other question forms?	___	___
18. Is the student developing reading skills appropriate to age/grade?	___	___
19. Is the student developing writing skills appropriate to age/grade?	___	___

20. Does the student appear distracted by noise or competing messages? ___ ___

21. Does the student use language as one of the primary means for obtaining information? ___ ___

It is my opinion that these behaviors:
Do not adversely affect the student's educational performance ___
Do adversely affect the student's educational performance ___

Do you have any other observations relating to the communication skills of this student?

_____

_____

Teacher Signature:_____ Date:_____

VOICE RATING SCALE

1. Circle the appropriate scores for each of the five categories: pitch, intensity, quality, resonance and adverse affect on educational performance.

2. Determination of ratings for the parameters of voice should be based on observation of voice in connected speech as well as during specific tasks appropriate for voice assessment. The Buffalo III Voice Profile is recommended during assessment for estimating the severity of each parameter prior to determining the severity on the voice rating scale.

3. Use the Teacher Input Form for voice to assess the adverse affect on educational performance. The Buffalo III Voice Abuse Profile can also be used (Appendix E).

4. Circle the score for each row and add them to obtain the Total Score (TS).

Total Score:	0-4	non disabled	Rating 1
Total Score:	5-8	mild	Rating 2
Total Score:	9-12	moderate	Rating 3
Total Score:	13-16	severe	Rating 4

5. The comment section may include statements regarding discrepancies among individual tests, subtests, classroom performance and other factors that are relevant to the determination of severity.

STUDENT:_____ DATE:_____
SCHOOL: _____ SLP:_____

VOICE RATING SCALE

	No Disability (1)	Mild (2)	Moderate (3)	Severe (4)
PITCH	Score = 0 Pitch within normal limits; Buffalo III Voice Profile Rating - 1	Score = 1 Pitch noticeably different, but intermittent; not distracting/ interference to communication; Buffalo III Voice Profile Rating - 2	Score = 2 Pitch persistently too high or low, inappropriate to age/ gender, interferes with communication; Buffalo III Voice Profile Rating - 3	Score = 3 Pitch persistently different/ inappropriate to age/gender and greatly interferes with communication; Buffalo III Voice Profile Rating – 4 -5
INTENSITY	Score = 0 Intensity within normal limits; Buffalo III Voice Profile Rating - 1	Score = 1 Intensity is noticeably different, but intermittent; not considered distracting/ interference to communication; Buffalo III Voice Profile Rating - 2	Score = 2 Intensity persistently too loud, soft, or dysphonic; inappropriate to situations, interferes with communication; Buffalo III Voice Profile Rating - 3	Score = 3 Intensity persistently too loud, soft, or dysphonic; inappropriate to situations, greatly interferes with communication; Buffalo III Voice Profile Rating - 4-5
QUALITY	Score = 0 Quality within normal limits; Buffalo III Voice Profile Rating -1	Score = 1 Quality noticeably different, but intermittent; not considered distracting or an interference to communication; Buffalo III Voice Profile Rating - 2	Score = 2 Quality persistently hoarse, breathy, tense, strident or contains other abnormal attributes, inappropriate for age/gender; interferes with communication; Buffalo III Voice Profile Rating - 3	Score = 3 Quality persistently hoarse, breathy, tense, strident or contains other abnormal attributes, inappropriate for age/gender; greatly interferes with communication; Buffalo III Voice Profile Rating - 4-5
RESONANCE	Score = 0 Resonance within normal limits; Buffalo III Voice Profile Rating - 1	Score = 1 Resonance noticeably different, but intermittent; not considered distracting or an interference to communication; Buffalo III Voice Profile Rating - 2	Score = 2 Resonance persistently different and inappropriate/ interferes with communication; Buffalo III Voice Profile Rating - 3	Score = 3 Resonance persistently different and inappropriate/ greatly interferes with communication; Buffalo III Voice Profile Rating - 4-5
ADVERSE AFFECT ON EDUCATIONAL PERFORMANCE	Score = 0 No interference with student's participation in educational settings	Score = 2 Minimal impact on student's participation in educational settings	Score = 3 Interferes with student's participation in educational settings	Score = 4 Greatly interferes with student's participation in educational settings
Total Score	0 1 2 3 4	5 6 7 8	9 10 11 12	13 14 15 16
Final Rating	(1) No Disability	(2) Mild Disability	(3) Moderate Disability	(4) Severe Disability

COMMENTS:

NOTE: The Buffalo III Voice Abuse Profile can also be completed as necessary. See Appendix E.

Instructions for the use of the Buffalo III Voice Profile

The Buffalo III Voice Profile is a rating tool that the SLP should complete after or during the voice assessment. The profile scales consist of five equal-appearing intervals. Twelve aspects of the voice are rated: laryngeal tone, pitch, loudness, nasal resonance, oral resonance, breath supply, muscles, voice abuse, rate, speech anxiety, intelligibility, and an overall voice rating. A rating of 1 indicates that the aspect is normal, while a rating of 5 indicates that the aspect is very severe. For speech intelligibility, a rating of corresponds to 100% intelligibility and percentages are dispersed in 25% increments, so that a rating a 5 indicates zero intelligibility.

Source: Wilson, D.K. (1987). Voice problems in children (3rd ed.). Baltimore, MD: Williams & Wilkins.

BUFFALO III VOICE PROFILE

Name _____ Birth Date _____ Age _____ Sex _____

Rater _____ Date _____ Time of Day _____ Place _____

	SEVERITY RATING				
	Normal	Mild	Moderate	Severe	Very Severe
1. **LARYNGEAL TONE** Breathy Harsh Hoarse	1	2	3	4	5
2. **PITCH** Too High Too Low	1	2	3	4	5
3. **LOUDNESS** Too Loud Too Soft	1	2	3	4	5
4. **NASAL RESONANCE** Hypernasal Hyponasal	1	2	3	4	5
5. **ORAL RESONANCE** Throatiness	1	2	3	4	5
6. **BREATH SUPPLY** Amount	1	2	3	4	5
7. **MUSCLES** Hypertense Hypotense	1	2	3	4	5
8. **VOICE ABUSE** Amount and Degree	1	2	3	4	5
9. **RATE** Too Fast Too Slow	1	2	3	4	5
10. **SPEECH ANXIETY** Amount and degree	1	2	3	4	5
11. **SPEECH INTELLIGIBILITY**	1 100%	2 75%	3 50%	4 25%	5 0%
12. **OVERALL VOICE RATING**	1	2	3	4	5

COMMENTS:

Adequate Aspects	Aspects for Improvement
1. _____	1. _____
2. _____	2. _____
3. _____	3. _____

Figure 6.4. Buffalo III Voice Profile.

Wilson, D.K. (1987). Voice problems in children, 3rd edition. Baltimore, MD: Williams & Wilkins. Used With Permission

TEACHER INPUT - VOICE

Student:_____ **Birth date:**_____
Teacher:_____ **Grade/Program:**_____

Your observations of the above student's voice will help determine if a voice disorder exists and if it adversely affects educational performance. Check all items that have been observed. Please return the completed form to the Speech-Language Pathologist.

	Yes	No
1. Does the student project loudly enough to be adequately heard in your classroom?	___	___
2. Does the student shout or speak with an excessively loud voice in the classroom or in other situations?	___	___
3. Is the student's pitch and pitch variations during speaking appropriate to his/her age and gender?	___	___
4. During speaking, does the student's pitch break up or down to the extent that this distracts from communication?	___	___
5. Does the student lose his/her voice at the end of the day or after playground or other activities?	___	___
6. Is the student's voice quality worse during any particular time of the day or after any particular activity? Is so, when?	___	___
7. Does the student's voice quality distract from communication?	___	___
8. Have you observed the student talking loudly, shouting, screaming, or imitating other voices? How often does this occur?	___	___
9. Does the student often cough or clear his/her throat?	___	___
10. Does the student or the parents express concern about the student's voice?	___	___
11. Does the student appear healthy or does the voice problem occur along with or directly after colds or allergies?	___	___
12. Does the student shy away from verbal classroom activities because of the voice disorder?	___	___
13. Does the student experience comments or bullying from others regarding his/her voice?	___	___

In my opinion these behavior no not adversely affect educational performance. ___
In my opinion these behaviors do adversely affect educational performance. ___

Do you have any other observations relating to the communication skills of this student?

_____

_____

Teacher Signature:_____ Date:_____

Adapted from Standards for the delivery of speech-language services in Michigan public schools, Michigan Speech-Language Hearing Association (1985).

FLUENCY RATING SCALE

1. Determination of a disability in speech fluency can be made through formal tests, informal observation and analysis or descriptive assessment. Two scale options are provided: the use of a published instrument and informal analysis of conversational speech.

2. Option A is to base the severity rating on the student's performance of The Stuttering Severity Instrument. A percentile score is used to determine a severity rating.

3. Option B is to complete an informal analysis of the frequency of stuttering behaviors during a language sample. Frequency of stuttering is used to determine a severity rating.

4. Use the Teacher Input Form for fluency to assess the adverse affect on educational performance.

5. Circle the score for each row and add them to obtain the Total Score (TS).

Total Score:	0-4	no disability	Rating 1
Total Score:	8-9	mild	Rating 2
Total Score:	10-12	moderate	Rating 3
Total Score:	14-16	severe	Rating 4

6. The comment section may include statements regarding discrepancies among individual tests, subtests, classroom performance and other factors that are relevant to the determination of severity.

STUDENT:_____ DATE:_____
SCHOOL: _____ SLP:_____

FLUENCY RATING SCALE - OPTION A

	No Disability (1)	Mild (2)	Moderate (3)	Severe (4)
STUTTERING SEVERITY INSTRUMENT - III	Score = 0 Formal assessment reveals that fluency is within normal limits; Percentile 0-4	Score = 4 Disfluent characteristics are present, but are fleeting and without concomitant behaviors; Percentile 5-40	Score 6 Disfluent characteristics are present and are accompanied by concomitant behaviors; Percentile 41-77	Score 8 Disfluent characteristics are present in majority of speaking situations and are accompanied by concomitant behaviors; Percentile 78-100
ADVERSE AFFECT ON EDUCATIONAL PERFORMANCE Social Emotional Academic Vocational	Score = 0 Fluency does not interfere with student's participation in educational settings	Score = 4 Disfluencies have minimal impact on student's participation in educational settings	Score = 6 Disfluencies interfere with student's participation in educational settings	Score = 8 Disfluencies seriously limit student's participation in educational settings
Total Score	0 1 2 4	8 9	10 11 12	14 15 16
Final Rating	(1) No Disability	(2) Mild Disability	(3) Moderate Disability	(4) Severe Disability

COMMENTS:

STUDENT:_____ DATE:_____
SCHOOL: _____ SLP:_____

FLUENCY RATING SCALE - OPTION B

	No Disability (1)	Mild (2)	Moderate (3)	Severe (4)
INFORMAL ANALYSIS OF STUTTERING FREQUENCY	Score = 0 Frequency of disfluencies within normal limits for student's age, gender, and speaking situations; < 1 word per minute	Score = 2 Periodic disfluencies observed in specific speaking situations; 1-3 words per minute	Score = 3 Disfluencies observed frequently in many situations; 4-10 words per minute	Score = 4 Disfluencies observed in the majority of speaking situations; > 10 words per minute
DESCRIPTIVE ASSESSMENT OF STUTTERING CHARACTERISTICS	Score = 0 Speech fluency and rate within normal limits for student's age and gender	Score = 2 Speech contains sound, syllable, and/or word repetitions or prolongations with no concomitant behaviors present; Rate of speech does not interfere with intelligibility	Score = 3 Speech contains sound, syllable, and/or word repetitions or prolongations, and/or silent blocks; concomitant behaviors are noticeable; Rate may interfere with intelligibility	Score = 4 Speech contains a high frequency of sound, syllable, and /or word repetitions or prolongations, and/or silent blocks; concomitant behaviors are noticeable and frequent; Rate interferes with intelligibility
ADVERSE AFFECT ON EDUCATIONAL PERFORMANCE Social Emotional Academic Vocational	Score = 0 Fluency does not interfere with student's participation in educational settings	Score = 4 Disfluencies have minimal impact on student's participation in educational settings	Score = 6 Disfluencies interfere with student's participation in educational settings	Score = 8 Disfluencies seriously limit student's participation in educational settings
Total Score	0 1 2 4	8 9	10 11 12	14 15 16
Final Rating	(1) No Disability	(2) Mild Disability	(3) Moderate Disability	(4) Severe Disability

COMMENTS:

TEACHER INPUT - FLUENCY

Student:_____ **Birth date:**_____
Teacher:_____ **Grade/Program:**_____

Your observations of the above student's speech fluency will help determine if the problem adversely affects educational performance. Check all items that have been observed. Please return the completed form to the Speech-Language Pathologist.

	Yes	No
1. Does the student have characteristics associated with stuttering (e.g., part or whole word repetitions, silent blocks, sound or word prolongations)?	___	___
2. Are the stuttering characteristics accompanied by other behaviors (e.g., tension in the upper trunk, head, and neck, facial tics, body movements)?	___	___
3. Does stuttering make it difficult to understand the content of his/her speech?	___	___
4. Does the student appear to talk less in the classroom because of stuttering?	___	___
5. Does the student avoid verbal participation during classroom activities?	___	___
6. Does the student avoid verbal participation in social situations?	___	___
7. Do you think the student is aware of his/her communication problems?	___	___
8. Have the student's parents talked to you about his/her fluency disorder?	___	___

In my opinion these behaviors do not adversely affect educational performance. ___
In my opinion these behaviors do adversely affect educational performance. ___

Do you have other observations relating to this student's communication skills?

_____

_____

Teacher's Signature:_____ Date:_____

Adapted from Standards for the delivery of speech-language services in Michigan public schools, Michigan Speech-Language Hearing Association (1985).

FUNCTIONAL COMMUNICATION RATING SCALE

1. The functional communication scale is used when the other scales are not appropriate for determining the severity of disability in articulation, language, voice or fluency. It is designed to be used for students with significant educational needs. The determination of severity is derived by rating five areas essential to successful communication: communication interactions, communication intentions, communication methods, comprehension, and adverse affect on educational performance.

2. It is often necessary to use informal measures of performance to document the communication abilities of students with significant needs. Use dynamic assessment strategies, classroom-based observation, teacher-made tests, etc. to determine the student's ability in:

- Communicative interactions - initiation of language, topic maintenance, turn taking, opening/closing conversations, etc.
- Communicative intentions - requesting, commenting, answering, etc.
- Communicative methods - verbal/vocal, sign/gestures, augmentative/alternative
- Comprehension abilities - vocabulary/concepts, one and two step directions, storing new information, retrieving learned information, etc.

3. Use the Teacher Input Form for functional communication to assess the adverse affect on educational performance.

4. Circle the score for each row and add them to obtain the Total Score (TS).

Total Score:	0-9	no disability	Rating 1
Total Score:	10-16	mild	Rating 2
Total Score:	17-24	moderate	Rating 3
Total Score:	25-28	severe	Rating 4

5. The comment section may include statements regarding discrepancies among individual tests, subtests, classroom performance and other factors that are relevant to the determination of severity.

STUDENT:_____ DATE:_____
SCHOOL: _____ SLP:_____

FUNCTIONAL COMMUNICATION RATING SCALE

	No Disability (1)	Mild (2)	Moderate (3)	Severe (4)
COMMUNICATIVE INTERACTIONS	Score = 0 Student successful in communicating through initiation, topic maintenance, turn taking, opening/closing conversations	Score = 2 Student usually successful in communicating through initiation, topic maintenance, turn taking, opening/closing conversations	Score = 3 Student frequently unsuccessful in communicating through initiation, topic maintenance, turn taking, opening/closing conversations	Score = 4 Student not successful in communicating through initiation, topic maintenance, turn taking, opening/closing conversations
COMMUNICATIVE INTENTIONS	Score = 0 Student successful in requesting objects/actions, commenting on objects/actions, etc.	Score = 2 Student usually successful in requesting objects/actions, commenting on objects/actions, etc	Score = 3 Student frequently unsuccessful in requesting objects/actions, commenting on objects/actions, etc	Score = 4 Student not successful in requesting objects/actions, commenting on objects/actions, etc
COMMUNICATIVE METHODS	Score = 0 Student successful in using one or more modes of communication, such as verbal, manual sign, AT system, pointing, etc.	Score = 2 Student usually successful in using one or more modes of communication, such as verbal, manual sign, AT system, pointing, etc.	Score = 3 Student frequently unsuccessful in using one or more modes of communication, such as verbal, manual sign, AT system, pointing, etc.	Score = 4 Student not successful in using one or more modes of communication, such as verbal, manual sign, AT system, pointing, etc.
COMPREHENSION OF LANGUAGE	Score = 0 Student successful comprehending what others say, sign, show, etc. by demonstrating knowledge through action or speech	Score = 4 Student usually successful comprehending what others say, sign, show, etc. by demonstrating knowledge through action or speech	Score = 6 Student is frequently not successful comprehending what others say, sign, show, etc. by demonstrating knowledge through action or speech	Score = 8 Student is not successful in comprehending what others say, sign, show, etc. by demonstrating knowledge through action or speech
ADVERSE AFFECT ON EDUCATIONAL PERFORMANCE Social Emotional Academic Vocational	Score = 0 Student's communication skills are adequate for participation in educational settings	Score = 4 Student's communication shills are usually adequate for participation in educational settings	Score = 6 Student's communication skills are frequently not adequate for participation in educational settings	Score 8 Student's communication skills are not adequate for participation in educational settings
Total Score	0 2 3 4 5 6 7 8 9	10 11 12 13 14 15 16	17 18 19 20 21 22 23 24	25 26 27 28
Final Rating	(1) No Disability	(2) Mild Disability	(3) Moderate Disability	(4) Severe Disability

Comments:

TEACHER INPUT - FUNCTIONAL COMMUNICATION

Student:_____ **Birth date:**_____
Teacher:_____
Grade/Program:_____

Your observations of the above student's functional communication will help determine if such problems adversely affect educational performance. Check all items that have been observed. Please return the completed form to the Speech-Language Pathologist.

	Yes	No
1. Are the communicative interactions (e.g., initiation, topic maintenance, turn-taking, greetings and closings) that convey social use of language adequate for classroom and social setting participation?	___	___
2. Is the student usually successful in requesting, commenting, and answering about objects, actions, etc? (Note that any mode of communication is acceptable.)	___	___
3. Is the student usually successful in using one or more modes of communication (e.g., verbal, sign, pointing, augmentative or alternative system)?	___	___
4. Does the student comprehend others by demonstrating knowledge of what was conveyed through action or speech?	___	___
5. Does the student use language at ability level to make his/her wants and needs known to others?	___	___
6. Does the student use language at ability level to learn new information or to convey what has been learned?	___	___

In my opinion these behaviors do not adversely affect educational performance. ___
In my opinion these behaviors do adversely affect educational performance. ___

Do you have other observations relating to the communication skills of this student?

_____

_____

Teacher Signature:_____ Date:_____

Adapted from Standards for the delivery of speech-language services in Michigan public schools, Michigan Speech-Language Hearing Association (1985).

Communication Scales
Example Cases

The purpose of the following examples is to show how the communication scales are used to determine eligibility for speech-language. The format may be used by SLPs when writing reports after the assessment and evaluation process is complete.

Case #1 - Articulation

Student: Jade C.A.: 6 years, 4 months

Background Information: Jade is in the first grade. She did not attend preschool and was home schooled in kindergarden. Jade was referred for a speech/language evaluation by her first grade teacher, due to multiple speech errors and poor intelligibility. Gross/fine motor screenings indicate skills within normal ranges. There are no reported language problems. Current health status is good. However, Jade has a history of ear infections between 18 months and three years of age. By parent and teacher report, Jade enjoys being social, but interactions are negatively impacted by Jade's inability to successfully communicate with her peers.

Oral mechanism examination - Structures are adequate for normal oral motor functioning necessary for eating and speech. Oral motor coordination for isolated speech sounds and non speech movements is within normal limits. Oral motor coordination for sequenced speech sounds is immature.

Articulation - Weiss Comprehensive Articulation Test revealed:
Articulation Score - 82 (age criterion score is 85)
Intelligibility Score - 85% intelligible

Test criteria state that an articulation score less than the stated age criterion score or an intelligibility score of less than 90% indicates an articulation disorder. Errors include t/k, d/g (initial word position only), j/l, d/th, t/s (initial position only), s/sh, w/r, t/ch (initial position only), reduced /s/ and /l/ blends. Errors are consistent throughout conversational speech. Stimulability for age appropriate sounds is good. Teacher input indicates that speech is very difficulty to understand unless context is known.

Language - Preschool Language Scale -3 revealed:
Auditory Comprehension - 89 (SS) (within 1 SD of mean)
Expressive Communication - 85 (SS) (borderline 1 SD of mean)
Developmental syntax errors noted in both formal test and informal language sample. Difficulty with sentence repetition.

Voice and Fluency - Within normal limits

Communication Rating Scales:

Articulation Rating Scale: Sound Production - 3; Stimulability - 1; Intelligibility - 3
Oral Motor and/or Motor Sequencing - 2; Adverse affect on educational performance - 3: Total Score = 17 (Moderate - 3)

Language Rating Scale: Formal - 2; Informal - 2; Adverse affect - 0; Total Score = 4 (No disability- 1)

Voice Rating Scale: Total Score = 0 (No disability - 1)

Fluency Rating Scale: Total Score = 0 (No disability - 1)

Overall Rating - 3 in Articulation qualifies student as eligible for speech-language

Case # 2 - Articulation

Student: Rio C.A.: three years, six months

Background Information - Rio is attending morning preschool and afternoon daycare five days a week at Sunshine Child Center . He was referred for a speech/language evaluation by his preschool teacher, due to multiple speech errors and poor intelligibility. Gross/fine motor screenings indicate skills within normal range. There are no concerns with isolated play skills, but Rio is not very communicative with peers or teachers. Current health status is good. There is no history of ear infections, but by parent report, Rio exhibited a weak suck at birth, had difficulty transitioning to solid foods, is a "messy eater," and only stopped drooling several months ago.

Oral mechanism examination - Structures are normal. Oral motor skills for eating/drinking appear weak or immature. Rio demonstrates poor grading of jaw movements, weak lip closure, and decreased tactile awareness around his oral/facial area. Oral motor coordination for both speech and nonspeech sounds is poor. Rio has difficulty imitating sequenced oral movements and multi-syllable combinations. Groping of articulators was noted during imitation tasks.

Articulation - Weiss Comprehensive Articulation Test
Articulation Score - 78 (age criterion score is 80)
Intelligibility Score - 75% intelligible

Test criterion states that an articulation score less than the stated age criterion score or an intelligibility score of less than 90% indicates an articulation disorder. Analysis of errors indicates that single word productions (in imitation) are generally intelligible and errors are developmental in nature. However, errors increase significantly as complexity of words and phrases increases. Single word errors include: t/k, d/g, j/l, d/th, -/f, -/s, t/sh, t/ch (initial position only) and reduced blends. Errors in conversation include omission of many medial and final sounds, omission of syllables in multiple syllable words, and

blend/cluster reductions. Stimulability of age appropriate sounds in isolated imitation tasks is good. Stimulability at the word level decreases significantly.

Language - Preschool Language Scale -3
Auditory comprehension 91 (SS) (within 1 SD of mean)
Expressive communication 79 (SS) (1.5 SD below mean)
Developmental syntax errors noted. Difficulty with sentence repetition and answering WH questions.

Fluency - mild, infrequent sound and word repetitions
Voice - no concerns

Communication Rating Scales:
Articulation Rating Scale: Sound Production - 3; Stimulability -3; Intelligibility - 6
Oral Motor and/or Motor Sequencing - 3; Adverse effect on educational performance - 6: Total Score = 21 (Moderate - 3)

Language Rating Scale: Formal - 3; Informal - 2; Adverse effect - 4; Total Score = 9 (Mild- 2)

Voice Rating Scale: Total Score = 0 (No disability - 1)

Fluency Rating Scale: Total Score = 0 (No disability - 1)

Overall Rating - 3 in Articulation qualifies student as eligible for speech-language

Case #3 – Functional Language

Student: Ethan C.A.: 8 years, 3 months

Background Information - Ethan is attending third grade at Riverside Elementary. He has a medical diagnosis of cerebral palsy as the result of anoxia at birth. Ethan is not ambulatory, does not speak, and has limited control of arms/hands. He does eat solid foods and drinks from a cup, but requires full assistance. Food textures and bite sizes need to be monitored for safety. A hearing screening involving sound field testing and tympanometry was passed. Vision was screened through informal activities. Ethan appears to recognize familiar objects and pictures, but has difficulty tracking items across midline. Distance vision is questionable. Ethan enjoys school, attends to TV, music, other students, and likes to be outside or engaged in physical movement on a mat or large ball. Testing was completed by informal activities, developmental norms, observation, play interactions, and parent teacher report.

Oral Mechanism Examination - Structures are normal, but oral motor control is limited. Ethan demonstrates a weak bite, tongue protrusion while chewing, and a simple munch pattern for most food textures. He attempts simple oral motor movements when

requested, such as "open your mouth," "stick out your tongue," and "blow a kiss," but control and grading are limited.

Articulation - Ethan demonstrates voluntary vocalizations, but cannot produce consistent speech sounds in imitation. Oral motor control is limited and verbal speech is not adequate for communication at this time.

Language/Communication - Ethan enjoys interactions with other people. He follows people around the room with his eyes, smiles when smiled at, attempts to say "hi" and laughs with his peers. Receptively, Ethan identifies familiar objects, clothes, and body parts by eye gaze and attempted reaching. He follows simple directions such as "knock it down" (blocks), "wait," "arms up please," and points to colors blue and green consistently. Expressively, Ethan vocalizes for attention, uses facial gestures and yes/no by nodding his head to answer simple questions. He is learning to make choices with a steady eye gaze when offered two objects or pictures. Ethan operates a single switch to turn on a tape recorder and uses a Macaw appropriately at snack time to ask for snacks. Ethan has not yet demonstrated the ability to answer simple questions about familiar stories by eye gaze/pictures.

Voice and Fluency - No concerns

Communication Rating Scales:
Articulation Rating Scale - NA
Language Rating Scale – NA
Voice Rating Scale - N/A
Fluency Rating Scale - N/A

*Since informal assessment was the only option for this student, the functional communication scale should be used to rate this student's abilities in communication.

Functional Communication Scale - Communicative interactions - 4; Communicative intentions - 3; Communication Methods - 4; Comprehension of language - 3; Adverse affect on educational performance - 4; Total Score = 25 (Severe)

Case #4 - Language

Brandon is a seventh grade middle school student. A review of his cumulative file indicates that written language has always been an area of need. He received small group support through the school wide intervention program in fifth and sixth grade. Brandon's performance on the CSAP was in the "Unsatisfactory" range. Brandon has been referred for a special education assessment due to failing grades in language arts and Ds in science and social studies. Brandon also has not met the sixth and seventh grade writing standards. He is motivated and wants to succeed, but is showing increasing frustration.

Oral Language - CELF-3

Expressive Language – SS 112
Receptive Language - SS 103
Total Language - SS 107 (average)

Written Language – TOWL-2 (Administered by SLP or learning specialist)

Thematic Maturity – 11
Contextual Vocabulary – 3 (below average)
Syntactic Maturity – 5 (below average)
Contextual Spelling – 3 (below average)
Contextual Style – 11
Spontaneous Language Quotient – 77

Cognition – WISC-3

Verbal – SS 82
Performance – SS 90
Full Scale – 88

Cognitive and Educational tests do not show processing or motor deficits. Does not meet PCD criteria.

Communication Rating Scale
Formal language score = 3
Informal language score = 3
Adverse affect on educational performance = 8
Total Score = 14 Severe delay
Qualifies for SL disability

Service delivery options
Direct speech-language services
Resource room support with SL consultation

Case # 5 - Language/Bilingual

Maria is 11 years and 2 months old and was born in Mexico. She is currently in the fourth grade. She has been in the U.S. public schools since kindergarten. Maria frequently goes to Mexico with her parents and has extended periods of absence from school. She has age appropriate social interactions with peers in both English and Spanish. Vocabulary, sentence structure, and grammar appear to be within age appropriate limits. She is able to answer "wh" questions and follows typical classrooms directions and routines. She is able to calculate change accurately in the family restaurant and in class activities. Maria received ESL services for two years, however, her parents requested that ESL services be discontinued because they prefer she learn through immersion. Since the discontinuation of ESL services, Maria's grades have dropped and she demonstrates an overall negative attitude toward school.

Communication Rating Scales
Articulation – 1
Language (Spanish) – 1
Voice – 1
Fluency – 1
Maria does not qualify for SL services. She needs to be re-enrolled in ESL services and parents need education/counseling about second language acquisition.

Case #6 - Written Language

Lisa is a new second grade student at Johnson Elementary. Her teacher reports that Lisa has some skills in sound/symbol association with individual consonants, but is significantly delayed with basic spelling and written language skills. In classroom activities, Lisa has difficulty with rhyming words, sound blending and decoding tasks. IRI and written language samples confirm delays in reading and writing (spelling, mechanics, and organization). Lisa interacts easily with teachers and peers. Language samples reveal adequate verbal language skills.

Assessment results
Language Scores:
PPVT-III SS 93
TOLD:P – SS 88
PAT – articulation below the 7$^{th\%}$ile
Cognitive Score:
WISC 3 – Verbal 95
Performance 90
Full Scale 92

Communication Rating Scales
Articulation – 1
Language – 3
Fluency – NA
Voice – NA

Lisa does not qualify for PCD because there is no discrepancy between achievement and cognitive ability. This student qualifies for SL services.

Service Delivery Options
Direct SL services with resource room support, or
SL consultation services in the resource room

APPENDIX A

FREQUENTLY ASKED QUESTIONS ABOUT THE GUIDELINES

FREQUENTLY ASKED QUESTIONS

1. When do SLPs consider cognitive scores in decisions about eligibility?

A comprehensive assessment typically includes data about cognition and achievement. The scores are considered along with all other data in the determination of eligibility for a disability category. When a student is determined to have primary eligibility as PCD or SLIC, a SL category should not automatically be added. Rather, the decision to add SL disability should be based on whether the student has speech-language problems that are in addition to the primary disability.

2. How are cognitive scores factored into decisions about SL service delivery and discontinuation of services?

Any student who has documented speech-language needs (> 1.5 S.D. below the mean) may be eligible to receive SL services regardless of disability category. The service delivery model can vary depending on the IEP team's determination of how best to meet the student's needs. The team should also refer to the 9 factors to determine whether discontinuation or suspension of services is recommended.

3. When are SLPs considered primary service providers, secondary service providers and related service providers?

When the SL disability is the primary or secondary disability, SLPs are considered providers of special education. When SL services are being provided in addition to other primary or secondary disabilities, SLPs are considered related service. For example, a student with a hearing impairment (primary disability) may receive SL as a related service, because the language needs are directly related to the primary disability. But, a student with a hearing impairment, who also has a cleft lip and palate, may receive SL as a secondary disability.

4. How do you determine a language rating when you have a range of scores from multiple formal tests?

Composite scores from two or more different tests should not be averaged. Rather, complete two separate ratings using the different composite scores

and determine if a difference exists in your total rating. If not, that rating should be considered your final total rating. If a difference does exist, use the educational impact and professional judgment to determine the final total rating.

5. When can speech and language services be discontinued?

With a primary or secondary speech-language disability, an eligibility staffing must be held in order to discontinue services. If speech-language is a related service, discontinuation may occur at an annual review or addendum meetings when goals/needs are met.

Is an evaluation necessary to discontinue a student as having a SL disability?

A student must have an evaluation in the area of the disability in order to determine that the student no longer has a disability. The IEP team must have a staffing to change the eligibility status of the student.

6. Can SLPs determine SL eligibility for students who have speech-language standard scores in the 77 to 85 range?

The >1.5 standard deviation cutoff corresponds to standard scores and/or quotients at or below 77. Formal test scores, however, are only one of several rating categories on the communication rating scales. Students who are not below the 1.5 standard deviation may qualify as having a SL disability if the other areas on the rating scales, including the rating for the formal test scores, determine their eligibility. It is therefore possible that a student who scores in the 77-85 range may receive a total rating that indicates a need for SL services.

SLPs may work with other IEP team members and classroom teachers to develop appropriate general education classroom interventions for students who do not qualify for SL services.

7. When is a speech-language assessment the only formal assessment required?

When a student is referred for speech-language assessment and there are no other concerns noted from the parents, teachers and the student's history, the

speech-language assessment can be the only formal assessment required. However, informal assessment from the other areas must be noted including classroom observation regarding academic performance.
IDEA states "the child is assessed in all areas related to the suspected disability, including, if appropriate, health, vision, hearing, social and emotional status, general intelligence, academic performance, communicative status, and motor abilities. In evaluating each child with a disability, the evaluation is sufficiently comprehensive to identify all the child's special education and related service needs, whether or not commonly linked to the disability category in which the child has been classified."

8. Why are composite scores versus subtest scores considered when making decisions about eligibility?

Test batteries with composite scores are constructed to assess several language constructs to form a profile of student abilities. Test battery composite scores (versus subtest scores) are used to determine the student's language skills. Oftentimes, individual receptive and expressive composites are available. It is appropriate to consider both of these, as well as total test composite scores.

9. How can the Communication Rating Scales be used during transition from preschool to kindergarten?

When preschoolers are transitioning to kindergarten, it is recommended that the Communication Rating Scales be used to document continued eligibility and service delivery or a change in the student's eligibility or service delivery status.

10. What is the role of professional judgment in the new guidelines and communication rating scales?

Professional judgment is important in all phases of assessment and determination of eligibility, service provision, and determining when to discontinue services. The guidelines and communication scales provide a framework for making decisions, but the expertise and professional judgment of each SLP is vital in those decisions.

11. Should SLPs attach the scales to the IEP and report?

No, you should document your findings from the scales in your report.

12. Should SLPs continue to document severity rating on the IEP?

Yes, it is common practice to document the severity rating on the IEP and it does provide team members' information about the areas involved (e.g., A3, L4) and the intensity of the disability.

13. What is the SLPs role in the assessment of written language?

SLPs in Colorado vary in their practices of assessing written language. Written language is included in the language scale along with oral language (just as it was in the old SRS). Each practitioner must determine the nature and extent of the speech-language evaluation. The scales allow for both oral and written language assessments. Formal assessment scores completed by the SLP or other team members can be used as the formal assessment tool on the language rating scale.

14. Can a student qualify as having a SL disability based solely on written language assessment?

Since oral language provides the foundations for written language, it would be unusual for a student to have only a written language disability. Students may have reading and writing problems that do not necessarily correspond to language disability. However, it is possible that students may have language problems that are reflected in reading and writing problems. Careful assessments and collaboration with IEP members is needed to determine whether the student has a SL disability, and further, whether SLP is the person with the unique skills to provide intervention to the student. In many cases the PCD resource person will provide the direct instruction for written language needs.

15. Preschoolers may at times refuse to participate in formal testing. How do SLPs use the rating scales when formal tests are not given?

There are several commercial scales that require parent/professional report and observation. These developmental scales have formal scores that can be used to rate the student.

16. When is it appropriate to use the Functional Communication Scale?

It is appropriate to use the Functional Communication Scale when other scales are not possible for determining the severity of the disability. If is designed to used with students who have significant (severe/profound) educational disabilities and who are unable to participate in formal assessments. The functional rating scale is used exclusively. It should not be used in conjunction with other rating scales.

17. When can an SLP bill for Medicaid reimbursement?

An SLP can bill when SL is a primary disability, a secondary disability, or a related service. They can also bill for screenings, assessments, conferences, staffing, etc. regarding students who are Medicaid eligible. For clarification in your district, contact your district Medicaid coordinator.

18. How long does it take for a student to begin receiving support once a concern is identified?

Although the pre-referral process will be slightly different for each individual student, educational support is available immediately through the use of accommodations and strategies generated by the Child Study Team and implemented by general education. After a determined and measurable period of time, interventions and student progress are reviewed and need for referral for a educational evaluation decided upon. If a formal evaluation proceeds, the legal time from referral to staffing is 45 days.

19. What is the SLP's role in the assessment and treatment of phonological awareness?

The staffing team should make the determination of a delay in phonological awareness. Formal tests that document a significant delay (7^{th} percentile) can be used in conjunction with the Language Rating Scale to document a disability, if the adverse affect on educational performance is significant. Service delivery options could include, but are not limited to, SL services, resource/PC teacher with SL consultation, reading specialist with SL consultation depending on who can best meet the needs of the student.

APPENDIX B

RULES (for the) ADMINISTRATION of the EXCEPTIONAL CHILDREN'S EDUCATION ACT: Children with Disabilities

Colorado Department of Education, 2000

2.01(2)(b) The child resides at one of the regional centers, mental health institutes, residential child care facilities, hospitals, group care facilities or homes, Colorado School for the Deaf and the Blind, or in a facility formerly operated by or under contract to the Department of Institutions and now transferred to the Department of Human Services, and the special education program is provided by an administrative unit other than the unit of residence.

2.01(2)(c) The child attends a Charter School or School of Choice and the Special Education program is provided by a special education administrative unit other than the administrative unit of residence.

2.02 Children with Disabilities

Children with disabilities shall mean those persons between the ages of three and twenty-one who are unable to receive reasonable benefit from regular education without additional supports in the public schools because of specific disabling conditions. A child shall not be determined to have a disability due to lack of instruction in reading or math or limited English proficiency. A child upon reaching his/her third birthday becomes eligible for services as of that date. A child reaching the age of 21 after the commencement of the academic year has the right to complete the semester in which the 21st birthday occurs or attend until he/she graduates, whichever comes first. In such a case, the child is not entitled to extended school year services during the summer following such current academic year. Children with disabilities may also mean those persons from birth to age three as defined in Section 2.02 (10) of these Rules.

2.02(1) A child with a physical disability shall have a sustained illness or disabling physical condition which prevents the child from receiving reasonable educational benefit from regular education.

2.02(1)(a) A sustained illness means a prolonged, abnormal physical condition requiring continued monitoring characterized by limited strength, vitality, or alertness due to chronic or acute health problems and a disabling condition means a severe physical impairment. Conditions such as, but not limited to, traumatic brain injury, autism, attention deficit disorder and cerebral palsy may qualify as a physical disability, if they prevent a child from receiving reasonable educational benefit from regular education.

2.02(1)(b) Criteria for a physical disability preventing the child from receiving reasonable educational benefit from regular education should be dependent upon the child's diagnosis and degree of involvement in the regular school setting as characterized by any of the following:

2.02(1)(b)(i) The child's chronic health problem or sustained illness requires continual monitoring, intervention, and/or specialized programming in order to accommodate the effects of the illness so as to reasonably benefit from the education program.

2.02(1)(b)(ii) The child's disabling condition interferes with ambulation, attention, hand movements, coordination, communication, self-help skills and other activities of daily living to such a degree that it requires special services, equipment, and/or transportation.

2.02(2) A child with a vision disability shall have a deficiency in visual acuity and/or visual field and/or visual performance where, even with the use of lenses or corrective devices, he/she is prevented from receiving reasonable educational benefit from regular education.

2.02(2)(a) A vision disability shall be one or more of the following:

2.02(2)(a)(i) Visual acuity of no better than 20/70 in the better eye after correction.

2.02(2)(a)(ii) Visual field restriction to 20 degrees or less.

2.02(2)(a)(iii) A physical condition of visual system which cannot be medically corrected and as such affects visual functioning to the extent that specially designed instruction is needed. These criteria are reserved for special situations such as, but not restricted to, oculomotor apraxia, cortical visual impairment, and/or a progressive visual loss where field and acuity deficits alone may not meet the aforementioned criteria.

The term "visual disability" does not include children who have learning problems which are primarily the result of visual perceptual and/or visual motor difficulities.

2.02(2)(b) Criteria for a vision disability preventing the child from receiving reasonable educational benefit from regular education shall include:

2.02(2)(b)(i) Requirement for Braille and/or adaptation of educational material, or

2.02(2)(b)(ii) Requirement of specialized methods, aids, and/or equipment for learning, literacy, and/or mobility.

2.02(3) A child with a hearing disability shall have a deficiency in hearing sensitivity as demonstrated by an elevated threshold of auditory sensitivity to pure tones or speech where, even with the help of amplification, the child is prevented from receiving reasonable educational benefit from regular education.

2.02(3)(a) A "deficiency in hearing sensitivity" shall be one of the following:

2.02(3)(a)(i) An average pure tone hearing loss in the speech range (500 - 2000 Hz) of at least 20 dBHL in the better ear which is not reversible within a reasonable period of time.

2.02(3)(a)(ii) An average high frequency, pure tone hearing loss of at least 35 dBHL in the better ear for two or more of the following frequencies: 2000, 4000 or 6000 Hz.

2.02(3)(a)(iii) A unilateral hearing loss of at least 35 dBHL which is not reversible within a reasonable period of time.

2.02(3)(b) Criteria for a hearing disability preventing the child from receiving reasonable educational benefit from regular education shall include one or more of the following:

2.02(3)(b)(i) Sound-field word recognition (unaided) of less than 75% in quiet as measured with standardized open-set audiometric speech discrimination tests presented at average conversational speech (50-55 dBHL). Interpretation shall be modified for closed-set tests.

2.02(3)(b)(ii) Receptive and/or expressive language delay as determined by standardized tests:

- under 3 years: less than one-half of expected development for chronological age.
- 3 to 8 years: 1 year delay or more.
- 9 to 13 years: 2 years delay or more.
- 14 to 21 years: 3 years delay or more.

2.02(3)(b)(iii) An impairment of speech articulation, voice and/or fluency.

2.02(3)(b)(iv) Significant discrepancy between verbal and nonverbal performance on a standardized intelligence test.

2.02(3)(b)(v) Delay in reading comprehension due to language deficit.

2.02(3)(b)(vi) Poor academic achievement.

2.02(3)(b)(vii) Inattentive, inconsistent and/or inappropriate classroom behavior.

2.02(4) A child with significant limited intellectual capacity shall have reduced general intellectual functioning which prevents the child from receiving reasonable educational benefit from regular education.

2.02(4)(a) Reduced general intellectual functioning shall mean limited intellectual capacity or ability which usually originates in the developmental period and exists concurrently with impairment in adaptive behavior.

2.02(4)(b) Criteria for significant limited intellectual capacity preventing the child from receiving reasonable educational benefit from regular education shall include:

2.02(4)(b)(i) A score of more than 2.0 standard deviations below the mean on individually administered measures of cognition.

2.02(4)(b)(ii) Evidence that the level of independent adaptive behavior is significantly below the culturally imposed expectations of personal and social responsibilities.

2.02(4)(b)(iii) A deficiency in academic achievement, as indicated by scores 2.0 standard deviations below the mean in measures of language, reading and math.

None of these indicators, by itself, shall be a sufficient criterion for determination of a significant limited intellectual capacity; however, all three indicators shall be evident for the determination of this disability. Professional judgment shall be required for interpretation of scores and/or other findings.

2.02(5) A child with a significant identifiable emotional disability shall have emotional or social functioning which prevents the child from receiving reasonable educational benefit from regular education.

2.02(5)(a) Emotional or social functioning shall mean one or more of the following:

2.02(5)(a)(i) Exhibits pervasive sad affect, depression and feelings of worthlessness; cries suddenly or frequently.

2.02(5)(a)(ii) Displays unexpected and atypical affect for the situation.

2.02(5)(a)(iii) Excessive fear and anxiety.

2.02(5)(a)(iv) Persistent physical complaints not due to a medical condition.

2.02(5)(a)(v) Exhibits withdrawal, avoidance of social interaction and/or lack of personal care to an

extent that maintenance of satisfactory interpersonal relationships is prevented.

2.02(5)(a)(vi) Out of touch with reality; has auditory and visual hallucinations, thought disorders, disorientation or delusions.

2.02(5)(a)(vii) Cannot get mind off certain thoughts or ideas; cannot keep self from engaging in repetitive and/or useless actions.

2.02(5)(a)(viii) Displays consistent pattern of aggression toward objects or persons to an extent that development or maintenance of satisfactory internal relationships is prevented.

2.02(5)(a)(ix) Pervasive oppositional, defiant or noncompliant responses.

2.02(5)(a)(x) Significantly limited self-control, including an impaired ability to pay attention.

2.02(5)(a)(xi) Exhibits persistent pattern of stealing, lying or cheating.

2.02(5)(a)(xii) Persistent patterns of bizarre and/or exaggerated behavior reactions to routine environments.

2.02(5)(b) Criteria for <u>significant</u> <u>identifiable</u> <u>emotional</u> <u>disability</u> preventing the child from receiving reasonable education benefit from regular education shall include the following characteristics and qualifiers:

2.02(5)(b)(i) One or both of the following characteristics shall be present:

- Academic functioning: an inability to receive reasonable educational benefit from regular education which is not primarily the result of intellectual, sensory or other health factors, but due to the identified emotional condition.

- Social/emotional functioning: an inability to build or maintain interpersonal relationships which significantly interferes with the child's social development. Social development involves those adaptive behaviors and social skills which enable a child to meet environmental demands and assume responsibility for his/her own and others' welfare.

2.02(5)(b)(ii) All four of the following qualifiers shall be documented for either of the above characteristics demonstrated. The first qualifier may not be applicable in the case of court ordered placements, triennial reviews and identification of children ages five years and younger.

- A variety of instructional and/or behavioral interventions were implemented within regular education and the child remains unable to receive reasonable educational benefit from regular education or his/her presence continues to be detrimental to the education of others.

- Indicators of social/emotional dysfunction exist to a marked degree; that is, at a rate and intensity above the child's peers and outside of his/her ethnic and cultural norms and outside the range of normal development expectations.

- Indicators of social/emotional dysfunction are pervasive, and are observable in at least two different settings within the child's environment, one of which shall be school.

- Indicators of social/emotional dysfunction have existed over a period of time and are not isolated incidents or transient, situational responses to stressors in the child's environment.

2.02(6) A child with perceptual or communicative disability shall have a disorder in one or more of the psychological processes involved in understanding or in using language which prevents the child from receiving reasonable educational benefit.

2.02(6)(a) A basic disorder in the psychological processes affecting language and/or learning may manifest itself in an impaired ability to listen, think, attend, speak, read, write, spell or do mathematical calculations. The term perceptual/communicative disability does not include students who have learning problems which are primarily the result of visual, hearing, or motor handicaps, or limited intellectual capacity or significant identifiable emotional disability, or who are of environmental, cultural, or economic disadvantage.

2.02(6)(b) Criteria for a perceptual or communicative disability preventing a child from receiving reasonable educational benefit from regular education shall include documentation of both.

2.02(6)(b)(i) A disorder in the psychological process which affects language and learning consisting of:

- Significant discrepancy between estimated intellectual potential and actual level of performance.
- Difficulty with cognitive and/or language processing.

2.02(6)(b)(ii) And significantly impaired achievement in one or more of the following areas:

- Prereading and/or reading skills.
- Reading comprehension.
- Written language expression, such as problems in handwriting, spelling, sentence structure and written organization.
- Comprehension, application and retention of math concepts.

2.02(7) A child with speech-language disability shall have a communicative disorder which prevents the child from receiving reasonable educational benefit from regular education.

2.02(7)(a) Speech-language disorders may be classified under the headings of articulation, fluency, voice, functional communication or delayed language development and shall mean a dysfunction in one or more of the following:

2.02(7)(a)(i) Receptive and expressive language (oral and written) difficulties including syntax (word order, word form, developmental level), semantics (vocabulary, concepts and word finding), and pragmatics (purposes and uses of language).

2.02(7)(a)(ii) Auditory processing, including sensation (acuity), perception (discrimination, sequencing, analysis and synthesis) association and auditory attention.

2.02(7)(a)(iii) Deficiency of structure and function of oral peripheral mechanism.

2.02(7)(a)(iv) Articulation including substitutions, omissions, distortions or additions of sound.

2.02(7)(a)(v) Voice, including deviation of respiration, phonation (pitch, intensity, quality), and/or resonance.

2.02(7)(a)(vi) Fluency, including hesitant speech, stuttering, cluttering and related disorders.

2.02(7)(a)(vii) Problems in auditory perception such as discrimination and memory.

2.02(7)(b) Criteria for a speech-language disability preventing a child from receiving reasonable educational benefit from regular education shall include:

2.02(7)(b)(i) Interference with oral and/or written communication in academic and social interactions in his/her primary language.

2.02(7)(b)(ii) Demonstration of undesirable or inappropriate behavior as a result of limited communication skills.

2.02(7)(b)(iii) The inability to communicate without the use of assistive, augmentative/alternative communication devices or systems.

2.02(8) A child with multiple disabilities shall have two or more areas of significant impairment, one of which shall be a cognitive impairment except in the case of deaf-blindness. Cognitive impairment shall mean significant limited intellectual capacity. The other areas of significant impairment include: physical, visual, auditory, communicative or emotional. The combination of such impairments creates a unique condition that is evidenced through a multiplicity of needs which prevent the child from receiving reasonable educational benefit from regular education.

2.02(8)(a) The definition of impairment shall be the same as that for each of the single disabilities.

2.02(8)(b) Criteria for multiple disabilities preventing a child from receiving reasonable educational benefit from regular education shall be the same as that considered for each of the single disabilities. Indicators for the combination of impairments creating a unique condition shall be:

2.02(8)(b)(i) Inability to comprehend and utilize instructional information.

2.02(8)(b)(ii) Inability to generalize skills consistently.

2.02(8)(b)(iii) Inability to communicate fluently.

2.02(8)(b)(iv) Inability to demonstrate problem solving skills when such information is presented in a traditional academic curriculum.

2.02(9) A preschool child with a disability shall be three through five years of age and shall, by reason of one or more of the following conditions, be unable to receive reasonable educational benefit from regular education: long-term physical impairment or illness, significant limited intellectual capacity, significant identifiable emotional disorder or identifiable perceptual or communicative disorders, or speech disorders.

2.02(9)(a) Children ages three through five who would otherwise qualify according to one or more of the above categorical conditions but for whom the category cannot be appropriately determined may qualify for preschool special education if multiple sources of information are utilized and if such children meet one or more of the following criteria:

2.02(9)(a)(i) Children who rank at the seventh percentile or below on a valid standardized diagnostic instrument, or the technical equivalent in standard scores (76 if the mean is 100 and the standard deviation is 16) or standard deviations (1.5 standard deviations below the mean) in one or more of the following areas of development: cognition, communication, physical and psychosocial.

2.02(9)(a)(ii) Children with identifiable conditions known through empirical data to be associated with significant delays in development.

2.02(9)(a)(iii) In extraordinary cases when a standardized score cannot be determined, a child may be determined disabled based on the informed opinion of the assessment team which includes the parent(s) and with documentation of the rationale for the inability to obtain a standardized score.

2.02(9)(b) Criteria for a preschool child being unable to receive reasonable educational benefit from regular education shall be a substantial discrepancy between the child's performance and behavior as compared to children of a comparable age.

2.02(10) An infant/toddler with a disability shall be a child from birth through two years of age who has significant developmental delays and who potentially may be unable to receive reasonable educational benefit from regular education is eligible for early intervention services and shall be defined by one of the following:

2.02(10)(a) Significant developmental delays shall mean those children who have a significant delay in at least one or more of the following areas of development: cognition, communication, physical, motor, vision, hearing, psychosocial and self-help skills. Significant development delay shall be demonstrated by a score of 1.5 standard deviations or more below the mean (or the technical equivalent in percentile (7th percentile) or standard scores (76 with

a mean of 100 and the standard deviation is 16) on an appropriate norm-referenced diagnostic assessment. Conditions associated with significant developmental delays shall mean those children who have identifiable conditions known to have a high probability of resulting in significant developmental delays, but who may not be exhibiting delays in development at the time of diagnosis. Those identifiable conditions are:

2.02(10)(a)(i) Chromosomal syndromes and conditions associated with mental retardation.

2.02(10)(a)(ii) Congenital syndromes and conditions associated with delays in development.

2.02(10)(a)(iii) Sensory impairments.

2.02(10)(a)(iv) Metabolic disorders.

2.02(10)(a)(v) Prenatal and perinatel infections and significant medical problems.

2.02(10)(a)(vi) Low birth weight infants weighing less than 1,000 grams.

2.02(10)(a)(vii) Post-natal acquired problems known to result in significant developmental delays.

2.02(10)(b) Criteria for an infant/toddler being eligible for early intervention services shall be a substantial discrepancy between the child's performance and behavior compared to children of a comparable age.

2.03 Special Education Revenues and Expenditures

2.03(1) Special education expenditures.

Special education expenditures are those costs which are incurred by an administrative unit for professional services associated with special education referrals and assessments of children who may be disabled and for the provision of special education services as identified on individual students' Individualized Educational Programs (IEPs), and do not include costs of the regular education program. An administrative unit which maintains and operates special education programs approved by the Department of Education for the education of students with disabilities shall use its ECEA and its federal funds received through the Department to pay for the special education expenditures listed below:

2.03(1)(a) Salaries of:

2.03(1)(a)(i) Special education teachers.

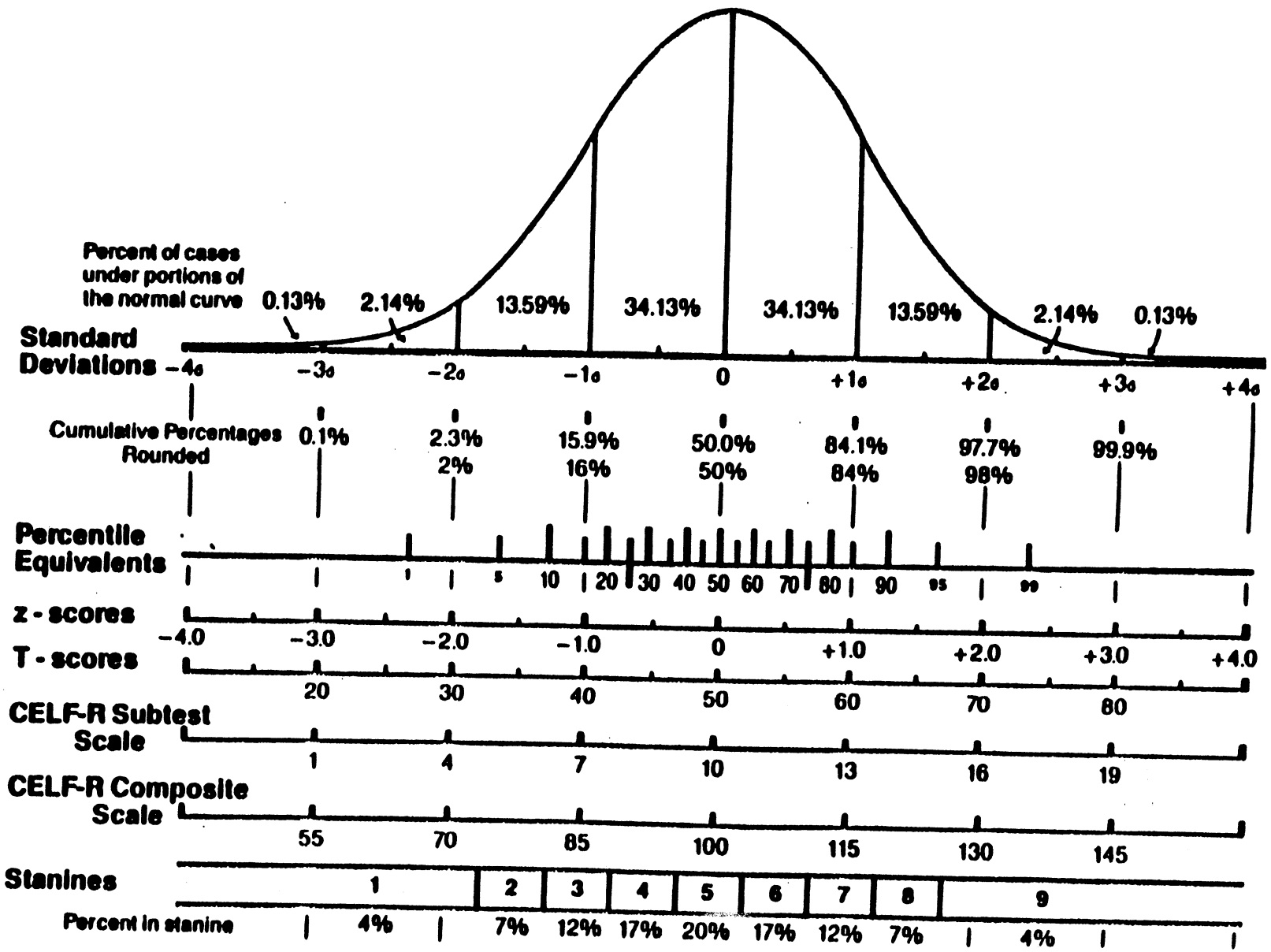
2.03(1)(a)(ii) Home-hospital teachers for students with disabilities.

2.03(1)(a)(iii) Speech/language specialists.

APPENDIX C

NORMATIVE INFORMATION DERIVED SCORES

The Normal Curve, Percentiles, and Selected Standard Scores



Conversion of Standard Scores to a Mean of 100 and a Standard Deviation of 15

Scores that are based upon normal curve distributions can be converted from one standard score type to another. This includes T scores (mean of 50, standard deviation of 10), z scores (mean of 0, standard deviation of 1), and other variations (e.g., mean of 50 and standard deviation of 16, as used with Standard Binet Fourth Edition composite scales). Percentiles and stanines can not be converted to standard scores.

The following formula is used to convert scores to a scale with a mean of 100 and standard deviation of 15:

Where X_{old} = score on old scale

M_{old} = mean of old scale

SD_{old} = standard deviation of old scale

$$\left(\frac{X_{old} - M_{old}}{SD_{old}} \right) 15 + 100 = \text{new standard score}$$

Example A.

The Stanford Binet Fourth Edition test composite is based on a mean of 100 and standard deviation of 16. The student obtains a test composite score of 64.

$$\left(\frac{64 - 100}{16} \right) 15 + 100 = 66.25$$

Example B.

The Basic Number Skills subtest of the Differential Ability Scales uses T scores, with a mean of 50 and standard deviation of 10. The student obtains a T score of 52 on Basic Number Skills.

$$\left(\frac{52 - 50}{10} \right) 15 + 100 = 103$$

SPEECH-LANGUAGE DISORDERS PROGRAM
Correlating Severity Ratings* to Test Scores

TEST	MILD	MODERATE	SEVERE
SSs & %iles from Normal Probability Curve	SS: 80-85 %: 10th-16th	70-79 5th-9th	Below 70 Below 5th
BOEHM BOEHM-R	%: 10th-15th	5th	1st-3rd
CELF	SS: 80-85 %: 9th-16th	70-79 3rd-8th	Below 70 Below 3rd
CELF-R	SS: 78-85 %: 10-16	71-77 2-9	Below 70 Below 2
DTLA-2	SS: 80-85 %: 8-16 Subtest SS: 6	70-79 4-7 4-5	Below 69 Below 3 1-3
DTLA-P	SS: 80-85 %: 8-16	70-79 4-7	Below 70 Below 3rd
EOWPVT Upper and Lower	SS: 80-85 %: 9th-16th	70-79 3rd-8th	Below 70 Below 3rd
FULLERTON	SS: 35-40 1 to 1½ sd below mean	30-35 1½ to 2 sd below mean	Below 30 Below 2 sd below mean
LANGUAGE PROCESSING TEST (LPT) (mean is 50, standard deviation is 10)	SS: 35-39	30-34	Below 30
PPVT-R PPVT	SS: 80-85 %: 9th-16th	70-79 3rd-8th	Below 70 Below 3rd
WORD (mean is 50, standard deviation is 5)	SS: 44-45 It is strongly recommended that this test not be administered prior to 3rd grade.	40-43	Below 40
M.A. Formula	$MA = \frac{IQ \times C.A.}{100}$		
Standard Deviation	Standard deviation from the mean = $\frac{\text{raw score - mean}}{\text{standard deviation}}$ (the mean and standard deviation are found in the manual.)		
Formula to convert SS with a mean of 50 to SS with a mean of 100.	$\frac{\text{Standard score - mean}}{\text{Standard Deviation}} = Z$, then $15z + 100 =$ standard score		

*These were revised and expanded by Cobb County SLPs (1987).

(Fulton County Schools)

Calculating Confidence Intervals

Essential psychometric information that should be made available to other professionals users in reporting scores includes test mean and standard deviation, obtained standard score and confidence interval (or standard error of measurement). For consistency, it is recommended that all standard scores be converted to a scale with a mean of 100 and standard deviation of 15 (see Appendix –).

Confidence intervals indicate the likelihood that a student's "true score" falls within a certain range. The range recommended for these purposes is the 90 percent level, meaning that there is a 90 percent chance that a hypothetical true score falls within the specified range. The range is an interval on either side of the obtained score. The size of the interval depends on the amount of error associated with a given score—the lower the reliability, the more error inherent in the obtained score and the larger the confidence interval. The reliability coefficient is used to compute the standard error of measurement, which in turn is used to compute the confidence interval. Test manuals often provide the standard error of measurement (SE_m).

The 90 percent confidence interval can be computed as follows:

$$\text{confidence interval} = \text{obtained score} \pm (1.65)\,(SE_m)$$

Note: the constant 1.65 corresponds to the 90 percent confidence level. For an 85 percent confidence level, substitute 1.44; for a 68 percent confidence level substitute 1.00.

Example: Child's obtained score is 90. Test manual indicates SE_m is 3.6.

$$\text{confidence interval} = 90 \pm (1.65) \times (3.6)$$

$$= 90 \pm 5.94$$

upper limit is approx. 96 (90 + 5.94)

lower limit is approx. 84 (90 - 5.94)

The chances that the range of scores from 84 to 96 includes the child's true score are about 90 out of 100.

If the standard error of measurement (SE_m) is not provided in the test manual, it can be computed from the reliability coefficient (r_{xx}) as follows:

$$(SE_m) = (\text{standard deviation}) \sqrt{1 - r_{xx}}$$

Example: Reliability coefficient for the test at the child's age level is .88.

$$(SE_m) = (15) \sqrt{1 - .88}$$

$$= 5.2$$

Note: it is presumed that the standard deviation is 15, as recommended.

Listed below are 90 percent confidence intervals for tests with a mean of 100 and a standard deviation of 15 at specified reliability coefficients.

Reliability coefficient	90 percent confidence interval
.98	± 2.1
.97	± 2.6
.96	± 3.0
.95	± 3.4
.94	± 3.7
.93	± 4.0
.92	± 4.2
.91	± 4.5
.90	± 4.7
.89	± 5.0
.88	± 5.2
.87	± 5.4
.86	± 5.6
.85	± 5.8

Reliability coefficient	90 percent confidence interval
.84	± 6.0
.83	± 6.2
.82	± 6.4
.81	± 6.5
.80	± 6.7
.79	± 6.9
.78	± 7.0
.77	± 7.2
.76	± 7.3
.75	± 7.5
.74	± 7.6
.73	± 7.8
.72	± 7.9
.71	± 8.1
.70	± 8.2

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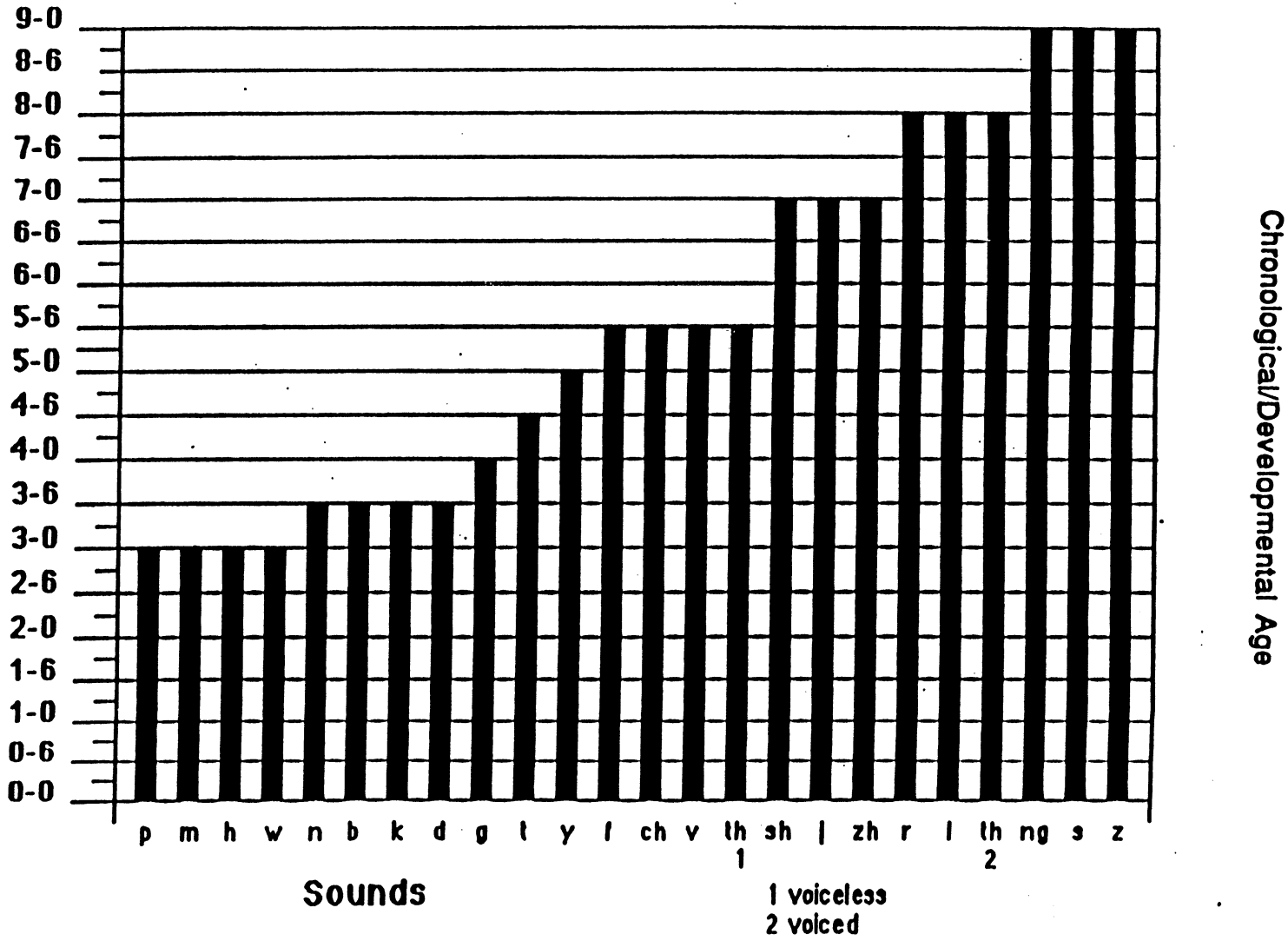
APPENDIX D

ARTICULATION/PHONOLOGY
DEVELOPMENTAL AND NORMATIVE INFORMATION

Name _____ Date _____ SLP _____

ARTICULATION PROFILE



THIS DEVELOPMENTAL SOUND CHART IS BASED ON THE IOWA (Smit) 1986 STUDY. EACH SOLID BAR REPRESENTS A SOUND. IT STOPS AT THE AGE LEVEL THAT 90% OF ALL CHILDREN ARE CUSTOMARILY PRODUCING THAT SOUND. VOWELS ARE USUALLY DEVELOPED BY AGE 3 (Weiss).

Iowa-Nebraska Articulation Norms

Nebraska Department of Education - Nebraska Articulation Norms Project

Listed below are the recommended ages of acquisition for phonemes and clusters, based generally on the age at which 90% of the children correctly produced that sound. These recommended ages are for phonetic acquisition only. Effective 9-17-90, this data should be used as the "normative standards required by the Nebraska Department of Education," as specified in 92 NAC 51, 006.04K4 when evaluating children suspected of having a speech-language impairment.

Phoneme	Age of Acquisition Females	Age of Acquisition Males
/m/	3;0	3;0
/n/	3;6	3;0
/-ŋ/	7;0	7;0
/h-/	3;0	3;0
/w-/	3;0	3;0
/j-/	4;0	5;0
/p/	3;0	3;0
/b/	3;0	3;0
/t/	4;0	3;6
/d/	3;0	3;6
/k/	3;6	3;6
/g/	3;6	4;0
/f-/	3;6	3;6
/-f/	5;6	5;6
/v/	5;6	5;6
/θ/	6;0	8;0
/ð-/	4;6	7;0
/s/	7;0	7;0
/z/	7;0	7;0
/ʃ/	6;0	7;0
/tʃ/	6;0	7;0
/dʒ/	6;0	7;0
/l-/	5;0	6;0
/-l/	6;0	7;0
/r-/	8;0	8;0
/-ɚ/	8;0	8;0
Word-Initial Clusters		
/tw kw/	4;0	5;6
/sp st sk/	7;0	7;0
/sm sn/	7;0	7;0
/sw/	7;0	7;0
/sl/	7;0	7;0
/pl bl kl gl fl/	5;6	6;0
/pr br tr dr kr gr fr/	8;0	8;0
/θr/	9;0	9;0
/skw/	7;0	7;0
/spl/	7;0	7;0
/spr str skr/	9;0	9;0

Note: Lateralized variants are not considered to be developmentally appropriate and therefore are not to be considered within the parameters of these data. Because of the limited availability of data regarding lateralizations, speech-language pathologists are encouraged to collect information regarding intervention with children manifesting lateralization problems, and share this data with NDE, so that suitable, specific recommendations for intervention may be forthcoming.

Decisions regarding intervention with children should take into consideration the dental development, motor maturation, and social/emotional welfare of the child.

Phonological Processes

Phonological Process	Description	Example	Developmental Information
A. Syllable Structure Processes 1. Deletion of Final Consonant	Reduction of CVC words or syllables to CV form, not usually sound specific	book → /bʊ/	Children who are developing language normally will begin to include final consonants by age 3.[1]
2. Cluster Reduction	Simplification of clusters of consonants usually by deleting the one that is most difficult to produce	tree → /ti/	Most children (90%) do not use cluster reduction after age 4.[1]
3. Weak Syllable Deletion	Deletion of unstressed syllables	telephone → /t fon/	Process does not exist in speech of normally developing children beyond age 4.[1]
4. Glottal Replace–ment	Replacement of final consonant of a syllable, usually in the intervocalic position, by a glottal stop; may mark the place of a consonant that is deleted	kitchen → /kɪʔən/	
B. Harmony Processes 1. Labial Assimila–tion	Substitution of a labial phoneme for a non–labial phoneme due to influence of a dominant labial phoneme contained within the word	thum → /wʌm/	
2. Alveolar Assimila–tion	Substitution of a phoneme which is produced with alveolar placement for a non–alveolar phoneme due to influence of a dominant alveolar phoneme within the word	yellow → /lɛlo/	
3. Velar Assimila–tion	Substitution of a phoneme which is produced with velar placement for a non–velar phoneme due to influence of a dominant velar phoneme within the word	dog → /gɔg/	
4. Prevocalic Voicing	Substitution of a voiced stop for its voiceless cognate due to influence of the following vowel	pig → /bɪg/	
5. Final Consonant Devoicing	Substitution of a voiceless stop for its voiced cognate due to influence of the silence following the word	bed → /bɛt/	Devoicing of final consonants does not occur after age 3 in normal phonological development.[1]

(continued)

[1] Phonological Disability in Children, cited by Linda M. Laila Khan, "A Review of 16 Major Phonological Processes," Language, Speech, and Hearing Services in Schools, (April 1982), pp. 77–85.

From *Speech and Language Services in Michigan: Suggestions for Identification, Delivery of Service and Exit Criteria,* edited by Elizabeth Loring Lockwood and Kathleen Pistano. East Lansing: The Michigan Speech–Language–Hearing Association. 1991. Used with permission.

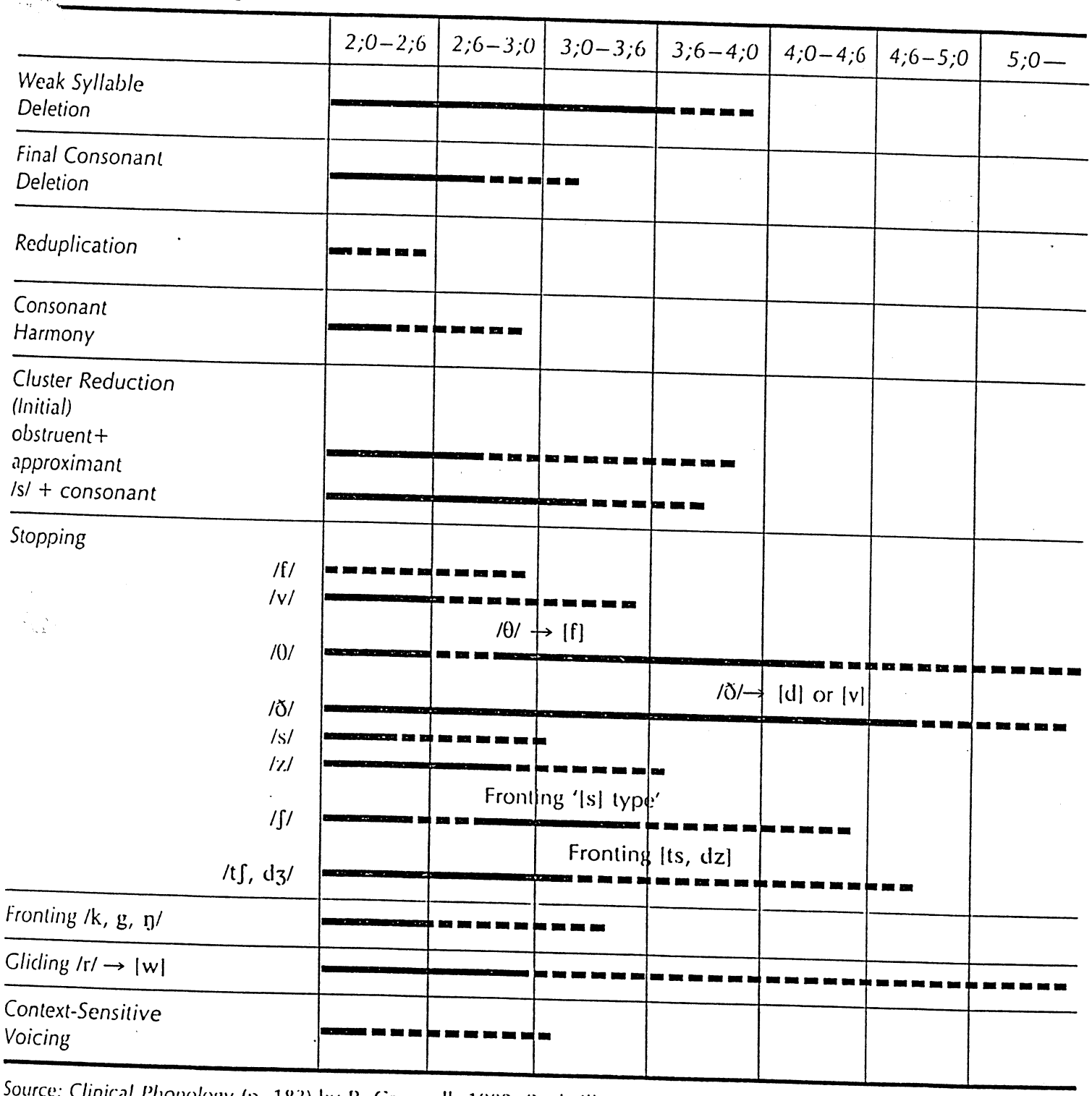
Phonological Processes (continued)

Phonological Process	Description	Example	Developmental Information
C. Feature Contrast Processes 1. Stopping	Substitution of a stop for a fricative	sun → /tʌn/	
2. Affrication	Substitution of affricatives for fricatives; usually occurs more often with sibilant fricatives than others	sun → /tsʌn/	Most fricatives should be correctly produced by age 4.[1]
3. Fronting	Substitution of phonemes by others which are produced anterior to the target phonemes; occurs commonly with velar stops	wagon → /wædn/	Reported to no longer be evident by age 4 in normally developing children.[1]
4. Gliding of Fricatives	Substitution of glides for fricative phonemes	soap → /jop/	
5. Gliding of Liquids	Substitution of /w/, and /j/ for /l/ or /r/; simplification process	red → /wɛd/	Majority of children reported to produce correct liquids by age 4.[1]
6. Vocalization	Substitution of vowels for syllabic consonants, most frequently /ʊ/ and /o/	table → /tebo/	Syllabics are usually acquired by age 4.[1]
7. Denasalization	Substitution of stops for nasals; usually affects word–initial and word–medial nasals more than word–final nasals	smoke → /bok/	

[1] Natural Process Analysis, cited by Linda M. Laila Khan, "A Review of 16 Major Phonological Processes," Language, Speech, and Hearing Services in Schools, (April 1982), pp. 77-85.

From *Speech and Language Services in Michigan: Suggestions for Identification, Delivery of Service and Exit Criteria*, edited by Elizabeth Loring Lockwood and Kathleen Pistano. East Lansing: The Michigan Speech–Language–Hearing Association, 1991. Used with permission.

TABLE 3.9
Chronology of Phonological Processes



Source: *Clinical Phonology* (p. 183) by P. Grunwell, 1982, Rockville, MD: Aspen Systems Corporation. Copyright 1982 by Aspen Systems Corporation. Reprinted with permission of Aspen Systems Corporation.

PHONOLOGICAL PROCESSES
Computation of Phonological Deviancy Score[1]

Phonological Deviancy Score - Mean percentage of occurences for 10 basic processes + Additional points

I. Mean percentage of occurrence for 10 Basic Processes:

Divide the total number of actual occurrences by the potential number of occurrences for each of the following basic phonological processes:

Omission Processes

1. Syllable Reduction
2. Prevocalic Singletons
3. Postvocalic Singletons
4. Consonant Sequences

Class Deficiencies

5. Stridents
6. Velars
7. Liquid (l)
8. Liquid (r)
9. Nasals
10. Glides

II. Additional Points:

A. **Points for Age**

As the pupil's age increases so does the urgency for treatment. Therefore, for pupils four years of age and older, extra points are added in computing the deviancy score. The following scale is used:

Age in Years	Added Points
4	5
5	10
6	15
7 and above	20

B. **Points for Backing**

The Phonological Deviancy Score will be greater if backing is evident. Five points are added if backing occurs on 40% or more of ther alveolar targets assessed.

*The Phonological Deviancy Score can be integrated into the Severity Rating Scale in the following manner:

Severity Rating	Phonological Deviancy Score
1	20 - 39
2	40 - 59
3	60+

*With permission of Dr. Barbara Hodson

[1] *Iowa's Severity Rating Scales for Speech and Language Impairments*, State of Iowa — Department of Education (1986).

Checklist of Factors Related to Speech Intelligibility

Check which of the following factors affect the intelligibility of the child's speech.

_____ number of speech sound errors;
_____ consistency of errors (e.g., some positions/all positions, some words containing sound/all words containing sound);
_____ frequency of occurrence of errors;
_____ types of sound errors;
_____ types of phonological processes used;
_____ morphology;
_____ syntax;
_____ length of utterance;
_____ complexity of utterance;
_____ type of speaking task (e.g., imitation/spontaneous, reading/speaking));
_____ prosody (e.g., inflection, stress, pauses);
_____ rate of speech;
_____ accompanying nonverbal language (e.g., gestures);
_____ environmental noise/distractions;
_____ familiarity of listener with speaker;
_____ familiarity of listener with content of speaker's message;
_____ foreign accent or dialect and familiarity of listener with same; time of day;
_____ fatigue of speaker;
_____ positioning/posture of speaker (e.g., lying/sitting/standing; slouched/erect)
_____ volume of speaker's voice;
_____ hearing status of listener;
_____ listener's patience; and
_____ motivation of speaker and listener

Comments:

Adapted From: Gordon-Brannan, M. "Assesing Intelligibility: Children's Expressive Phonologies." *Topics in Language Disorders* 1994: 14 (2), 17-
Crary, M. A. "Clinical Evaluation of Developmental Motor Speech Disorders." *Seminars in Speech and Language* 1995: 16 (2), 110-125.

APPENDIX E

ORAL/MOTOR, RATE, AND VOICE NORMATIVE INFORMATION

The Fletcher Time-by-Count Test of Diadochokinetic Syllable Rate

NAME: _____ DATE: _____

B.D. _____ AGE: _____ EXAMINER: _____

SYLLABLE	REPETITIONS	# SECONDS	NORMS BY AGE							
			6	7	8	9	10	11	12	13
pʌ	20	____	4.8	4.8	4.2	4.0	3.7	3.6	3.4	3.3
tʌ	20	____	4.9	4.9	4.4	4.1	3.8	3.6	3.5	3.3
kʌ	20	____	5.5	5.3	4.8	4.6	4.3	4.0	3.9	3.7
fʌ	20	____	5.5	5.4	4.9	4.6	4.2	4.0	3.7	3.6
lʌ	20	____	5.2	5.3	4.6	4.5	4.2	3.8	3.7	3.5
			1.0*		0.7*		0.6*			
pʌtə	15	____	7.3	7.6	6.2	5.9	5.5	4.8	4.7	4.2
pʌkə	15	____	7.9	8.0	7.1	6.6	6.4	5.8	5.7	5.1
tʌkə	15	____	7.8	8.0	7.2	6.6	6.4	5.8	5.5	5.1
			2.0*		1.6*		1.3*			
pʌtəkə	10	____	10.3	10.0	8.3	7.7	7.1	6.5	6.4	5.7
			2.8*		2.0*		1.5*			

*Standard deviation for syllable(s) within and across age levels.

Instructions for Test Administration:

Eleven steps are involved in eliciting and timing diadochokinetic utterances: (1) Tell examinee, S, that you are going to time how fast he can say some sounds. Point out that they are just sounds, not words. (2) Demonstrate pattern of repeating syllable (s) at a rapid rate. (3) Ask S to repeat the sound with you "like this:" Start repeating the syllable (s) and expect S to follow. The rate should be fairly rapid although S may be somewnat slower than you. (4) Instruct S to say the sounds as fast as he can. Use this response set to check correctness of the utterance pattern and verify effort. If unsure of either accuracy or effort, reinstruct and recheck. (5) Tell S to "do it again, even faster this time" and "Don't stop until I tell you." Indicate that you need to count "a lot of" the utterances and that if he slows down or stops too soon, you will need to start over again. (6) Say "Go!" and start stop-watch at moment utterances begin. Hold watch in unobtrusive position so it doesn't distract S. Effort of S may be enhanced by hand gesture. For example, move hand upward as response continues to signal need to keep repeating sounds rapidly. (7) Count syllables silently until criterion number shown on score sheet is reached. (8) Say "Stop" and simultaneously turn off the stop-watch. (9) Read elapsed stop-watch time and enter result in proper space on score sheet. (10) Reset stop-watch, introduce next syllable(s) and continue until all responses have been elicited and response times transcribed. (11) Use norms to interpret results.

Oftentimes after the first set of responses, S will start repeating syllables as a new set is introduced. This is accepted as a combination of steps 1 and 2. No other shortcuts should be permitted.

Initially and periodically thereafter the timed responses should be tape recorded. The taped responses should be replayed later at normal and at slow speeds to verify your observations of repetitions counted and time consumed. Counting the multisyllables may be facilitated by attending to occurrences of initial syllables, e.g. the /pʌ/s in /pʌtə/.

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BACKGROUND INFORMATION

When people are unskilled, their motion patterns are irregular. For example, in early motor learning a person tends to make a movement, evaluate the results, make another movement, and so on. As skill increases, the movements are blended and a strong rhythmic pattern emerges which helps to integrate and coordinate groups of movements. Rapid rates of movements then become possible and in fact may be used as an index of motor skills. Diseases of the central nervous system, and particularly of the basal ganglia and cerebellum, and disturbances of peripheral sensory-motor functions, as well as immaturities, are factors that can profoundly influence rapid, rhythmic execution of such complex motions as those found in speech.

Performance in rapidly alternating movements, such as pronation and supination of the hand and side-to-side motions of the tongue, has long been used to study the integrity of motor control in bodily functions. The process is termed "diadochokinesia." In speech this term has been extended to include syllable repetition at a maximum rate of utterance.

The utility of diadochokinetic syllable rate evaluation has been particularly evidenced in studies of neurological disturbances underlying speech disorders. Patients with spastic dysarthria, for example, exhibit difficulty in producing complex syllable combinations, and the rate of syllable repetition when accomplished is slow but rhythmical. Those with Parkinson's disease typically produce syllables at a normal rate but blur the movements together so that it is oftentimes difficult to identify syllable boundaries. Persons with ataxic dysarthria from cerebellar disease show slowness and dysrhythmia with irregular pitch and loudness.

Syllable repetition may also be used to help identify subtle disturbances in oral motor control. For example, slowness in diadochokinetic syllable rate, especially of polysyllables, has been found to be a significant correlate of speech intelligibility in children with repaired palatal clefts. This procedure can thus be used to probe oral motor coordination which may reflect residual impairment of speech structure or function.

NORMATIVE DATA

The normative data in the accompanying table were collected from utterances of 384 children, 24 boys and 24 girls, at each age level shown.* The scores represent the time, in seconds, consumed in 20, 15 and 10 repetitions of the syllables and syllable combinations denoted in the chart. The scores were derived from analysis of oscillographic records, displaying the syllable pulses across a background of 0.1 second time markers. Stop-watch measurements were also made at the time the responses were originally tape recorded. Statistical comparisons between the stop-watch and oscillographic data showed the scores to be virtually identical. Only the single-syllable /kʌ/ was significantly different. The mean stop-watch time was 4.59 seconds while that from the oscillographic record was 4.51 seconds. Thus, the real difference between the time consumed to produce the 20 responses was very small even for the /kʌ/. No other utterances even approached significance.

The scores from boys and girls were also similar. In general the girls were slightly faster in their rate of syllable repetition at younger ages and slower at older ages. The girls were a bit faster in repeating monosyllables while the boys were faster in repeating polysyllables. Those differences were small and generally insignificant, however. The mean differences between sexes by sound and for all sounds combined never exceeded 0.5 seconds. Thus the scores shown may be used to evaluate responses from either sex.

Finally, question may be raised concerning the best order for presenting the different syllables and syllable combinations. The analysis of variance of the original data showed no significant differences among different orders of the stimuli in the test protocol. On the basis of this, it is suggested that an examiner may follow any order desired, including that shown in the chart.

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*Fletcher, S.G., Time-by-count measurement of diadochokinetic syllable rate. *J. Speech Hearing Res.*, 15, 763-770 (1972).

RATE OF SPEECH

Child Syllable Rates

Age (yr)	Mean Syllables/min (SPM)	Range	SD
3.0 - 3.11	157.21	96.84 - 198.36	26.28
4.0 - 4.11	168.72	141.70 - 215.66	19.71
5.0 - 5.11	158.84	98.33 - 206.85	27.21
6.0 - 6.11	169.38	114.16 - 217.58	27.78
7.0 - 7.11	172.57	117.02 - 213.15	24.83

From Culatta, R., Page, J.L. & Wilson, L (1987). Speech rates of normally communicative children. American Speech-Language and Hearing Association's Annual Convention, New Orleans, LA.

Peters and Guitar (1991) report normal speaking rates as follows, citing numerous studies.

Preschoolers (Pindzola, R., Jenkins, M., and Lokken, K. (1989)

Age	Range in Syllables per Minute
3 years	116 - 163
4 years	117 - 183
5 years	109 - 183

Peters, T.J., and Guitar, B. *Stuttering: An Integrated Approach to Its Nature and Treatment.* Baltimore: Williams and Wilkins, 1991.

Pindzola, R. and Jenkins, M. and Lokken, K.. "Speaking Rates of Young Children." *Language, Speech, and Hearing Services in Schools*, 1989: 20, 133-138.

There are no data available for words per minute for preschoolers. Peters and Guitar recommend collecting a 5 minute sample.

School Age Children

Collect two speech samples (speaking and reading). A 5 minute sample is preferred, but a 3 minute sample is acceptable.

Stuttering may interfere with rate of speech during speaking and/or reading. Peters and Guitar (1991) measured the rates of school age children in Vermont during conversation. Their expectation was that rates of children in other states would be similar. In their calculations, they included normal pauses, but excluded pauses for thought that were longer than 2 seconds. They provide the following range of speech rates:

Age	Range
6 years	140 – 175 syllables per minute
8 years	150 – 180 syllables per minute
10 years	165 – 215 syllables per minute
12 years	165 - 220 syllables per minute

Adolescents and Adults

Peters and Guitar (1991) recommend collecting a 5 minute sample of conversational speech and a 5 minute reading sample. Andrews and Ingham (1971) report the following normal speaking rates and Darley and Spriestersbach (1978) report the following normal reading rates.

Adolescent/Adult Speech Rates	(WPM) Words per Minute (Range)	(SPM) Syllables per Minute (Range)
Speaking Rates	115 - 165	162 – 230*
Reading Rates	150 - 190	210 - 265

*Mean = 196

Peters, T.J. and Guitar, B. *Stuttering: An Integrated Approach to Its Nature and Treatment.* Baltimore: Williams and Wilkins, 1991.

Andrews, G. and Ingham, R. "Stuttering Considerations in the Evaluation of Treatment." British Journal of Communication Disorders, 1971: 6, 129-138.

Johnson, W., Darley, F.L., and Spriestersbach, D.C., *Diagnostic Methods in Speech Pathology.* New York, Harper & Row, 1978.

Instructions for the Buffalo III Voice Abuse Profile

The Buffalo III Voice Profile should be completed prior to using the abuse profile. Children who receive a rating of 2 or higher on the voice abuse item should have the abuse profile completed. Eleven common types of voice abuse and an overall rating are included in the profile. Observation of the student in several difference situations is recommended and the parents may rate their child's vocal activities. Older children and teems may rate themselves. The ratings increase from 1 (normal) to 5 (very severe) depending on the frequency of use and vigor with which the abuse is occurring.

The following definitions can be used by SLPs for the voice voice abuses:

Shouting, Yelling, Screaming, Cheering – extremely loud, sometimes reaching 90-100 dB; sudden sharp loud cry; harsh high tones

Loud Talking – 90-100 dB when measured 18 inches from the speakers mouth

Excessive Talking – talking a lot during the day and night; 3 times more talkative than peers

Abrupt Glottal Attack – an explosive release of vocalization; buildup of pressure followed by a sudden release of sound

Reverse Phonation – vocalizing on the intake of air; often seen during play or imitating sounds

Throat Clearing and Coughing – habitual, excessive, and hard coughing and throat clearing

Talking in Noise – talking in the presence of high level noise, such as when listening to music, riding in automobiles or on sport machines, and when around garden and farm equipment

Loud Whispering – high air pressure and air flow may produce muscle tension in the face and neck

Strained Vocalizations – vocal imitation of vehicles and other sounds

Explosive Vocalization – built up air pressure in the subglottic area with the vocal cords tightly closed, followed by a sudden opening of the cords during forceful vocalization

Source: Wilson, D.K. (1987). Voice problems in children (3rd Ed.). Baltimore, MD: Williams & Wilkins.

BUFFALO III VOICE ABUSE PROFILE

Name _____ Birth Date _____ Age _____ Sex _____

Rater _____ Date _____ Time of Day _____ Place _____

	SEVERITY RATING				
	Normal	Mild	Moderate	Severe	Very Severe
1. SHOUTING, YELLING, SCREAMING, CHEERING	1	2	3	4	5
2. LOUD TALKING	1	2	3	4	5
3. EXCESSIVE TALKING	1	2	3	4	5
4. LOUD WHISPERING	1	2	3	4	5
5. STRAINED VOCALIZATIONS	1	2	3	4	5
6. EXPLOSIVE VOCALIZATIONS	1	2	3	4	5
7. ABRUPT GLOTTAL ATTACK	1	2	3	4	5
8. REVERSE PHONATION	1	2	3	4	5
9. THROAT CLEARING	1	2	3	4	5
10. COUGHING	1	2	3	4	5
11. TALKING IN NOISE	1	2	3	4	5
12. OVERALL VOICE ABUSE RATING	1	2	3	4	5

COMMENTS:

Three Major Voice Abuses:

1. _____

2. _____

3. _____

Figure 6.5. Buffalo III Voice Abuse Profile.

Wilson, D.K. (1987). Voice problems in children (3rd Ed.). Baltimore, MD: Williams & Wilkins. Used with permission.

APPENDIX F

LANGUAGE - ORAL AND WRITTEN DEVELOPMENTAL INFORMATION AND CHECKLISTS

Target		Spelling	Alveolar	Cluster creation	Addition	Metathesis/migration	Extra liquids	Fronting	Stopping	Vowel alteration	Deaffrication	Depalatalization	Velars	Glides	Stridents	Nasals	Liquid /r/	Postvocalic singletons	Intervocalic singletons	Syllables	Consonant sequences
Nonsense-syllable items																					
twilm	→	tillem			✓									✓							✓
tronk	→	truce								✓						✓					✓
streacham	→	schter				✓✓										✓				✓	✓
sprink	→	spret						✓		✓			✓			✓					✓
splick	→	splet						✓		✓			✓								
scumpt	→	scotent	✓		✓					✓											✓
joskr	→	guster						✓		✓			✓								
frinching	→	frinthin						✓			✓	✓	✓		✓						
clite	→	clate								✓											
chells	→	chills								✓					✓						✓
True-word items																					
watch	→	waser			✓✓		✓				✓	✓									
three	→	theen			✓												✓				✓
sweater	→	ster												✓						✓	
square	→	sqere												✓							✓
smoke	→	scoteser			✓✓ ✓	✓	✓		✓							✓					
screwdriver	→	squdrve															✓✓			✓	✓
queen	→	qeen												✓							✓
music box	→	mouster box		✓	✓		✓			✓			✓	✓							✓
jump rope	→	gimp rip								✓✓											
ice cubes	→	si cube				✓									✓						✓
hanger	→	haner						✓													
glasses	→	glass																	✓	✓	
flower	→	flaow								✓							✓				
crayons	→	carinsteds			✓✓ ✓	✓				✓										✓	✓
candle	→	candol																			
basket	→	bask																✓		✓	

Figure 1. Examples of phonological deviations in Matthew's spelling errors

Clark-Klein, S. (1994). Expressive phonological deficiencies: Impact on spelling development. Topics in Language Disorders, 14(2), 40-55.

Appendix
Checklist for Phonological Awareness Progression

Does this child demonstrate the ability to

_____ respond to the rhythm/prosodic elements of nursery rhymes, songs, fingerplays, etc., by imitating vocal patterns?

_____ use beginning temporal sequencing, pairing a phrase in a rhyme or song with a corresponding movement, picture, or object?

_____ visually follow pointing and auditory cues that track from top to bottom and left to right of a page?

_____ distinguish between pictures and written words in a book (e.g., "Show me the pictures. Now show me the words")?

_____ respond appropriately to beginning word games (e.g., "What does the cow say?" or "Old McDonald had a farm and on his farm he had a _____")?

_____ recognize that some visual symbols stand for an entity (e.g., When this child sees the golden arches, does this child say "McDonald's")?

_____ understand that a word is separate from its meaning and what constitutes a "long" word versus a "short" word (e.g., *caterpillar* is a long word and *snake* is a short word)?

_____ demonstrate an understanding of the language of literacy; ___ top, ___ bottom, ___ same, not the same/different, ___ first or beginning, ___ last or ending, ___ before, ___ after, ___ word?

_____ hear and see that portions of words are the same (e.g., thir*teen*, four*teen*, fif*teen*, etc.)?

_____ use rhymes where syllables are emphasized (e.g., Ee nie, mea nie, mi nie, mo . . .)?

_____ segment or count syllables in multisyllabic words?

_____ use top-to-bottom sequencing on a page?

_____ use left-to-right sequencing to sweep across lines in a text?

_____ point to individual words for reading, even though the words spoken may not be the correct ones?

_____ recognize his or her own written name?

_____ see his or her own first initial in other words?

_____ recognize other letters from his or her name in words that he or she sees?

_____ have sound-to-symbol correspondence for any alphabet letters? Which ones? _____

_____ think of a rhyming word for a word given by the teacher?

_____ segment a two-phoneme word into two parts (e.g., *sew* into /s/ and /ou/)?

_____ segment a three-phoneme word into three parts (e.g., *rope* into /r/, /ou/, /p/)?

Jenkins, R., & Bowen, L. (1994). Facilitating development of preliterate children's phonological abilities. Topics in Language Disorders, 14 (2), 26-39.

This checklist is designed to identify children who are at risk for language-based reading disabilities. It is intended for use with children at the end of kindergarten or beginning of first grade. Each of the descriptors listed below should be carefully considered and those that characterize the child's behavior/history should be checked. A child receiving a large number of checks should be referred for a more in-depth evaluation.

Speech Sound Awareness

- ☐ doesn't understand and enjoy rhymes
- ☐ doesn't easily recognize that words may begin with the same sound
- ☐ has difficulty counting the syllables in spoken words
- ☐ has problem clapping hands or tapping feet in rhythm with songs and/or rhymes
- ☐ demonstrates problems learning sound-letter correspondences

Word Retrieval

- ☐ has difficulty retrieving a specific word (e.g., calls a sheep a "goat" or says "you know, a woolly animal")
- ☐ shows poor memory for classmates' names
- ☐ speech is hesitant, filled with pauses or vocalizations (e.g., "um," "you know")
- ☐ frequently uses words lacking specificity (e.g., "stuff," "thing," "what you call it")
- ☐ has a problem remembering/retrieving verbal sequences (e.g., days of the week, alphabet)

Verbal Memory

- ☐ has difficulty remembering instructions or directions
- ☐ shows problems learning names of people or places
- ☐ has difficulty remembering the words to songs or poems
- ☐ has problems learning a second language

Speech Production/Perception

- ☐ has problems saying common words with difficult sound patterns (e.g., animal, cinnamon, specific)
- ☐ mishears and subsequently mispronounces words or names
- ☐ confuses a similar sounding word with another word (e.g., saying "The Entire State Building is in New York")
- ☐ combines sound patterns of similar words (e.g., saying "escavator" for escalator)
- ☐ shows frequent slips of the tongue (e.g., saying "brue blush" for blue brush.)
- ☐ has difficulty with tongue twisters (e.g., she sells seashells)

Comprehension

- ☐ only responds to part of a multiple element request or instruction
- ☐ requests multiple repetitions of instructions/directions with little improvement in comprehension
- ☐ relies too much on context to understand what is said
- ☐ has difficulty understanding questions
- ☐ fails to understand age-appropriate stories
- ☐ has difficulty making inferences, predicting outcomes, drawing conclusions
- ☐ lacks understanding of spatial terms such as left-right, front-back

Expressive Language

- ☐ talks in short sentences
- ☐ makes errors in grammar (e.g., "he goed to the store" or "me want that")
- ☐ lacks variety in vocabulary (e.g., uses "good" to mean happy, kind, polite)
- ☐ has difficulty giving directions or explanations (e.g., may show multiple revisions or dead ends)
- ☐ relates stories or events in a disorganized or incomplete manner
- ☐ may have much to say, but provides little specific detail
- ☐ has difficulty with the rules of conversation, such as turn taking, staying on topic, indicating when he/she does not understand

Other Important Factors

- ☐ has a prior history of problems in language comprehension and/or production
- ☐ has a family history of spoken or written language problems
- ☐ has limited exposure to literacy in the home
- ☐ lacks interest in books and shared reading activities
- ☐ does not engage readily in pretend play

ry 1997

Comments

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[1] This checklist was prepared by Hugh W. Catts, University of Kansas. Some descriptors have been taken from *Language for Learning: A Checklist for Language Difficulties*, Melbourne, Australia: OZ Child. The American Speech-Language-Hearing Association grants permission to photocopy this checklist for professional use.

Catts, H.W. (1997). The early identification of language-based reading disabilities, Language Speech and Hearing Services in the Schools, 28, 86-87.

Table 2.2
Narrative Development

1. **Heaps**
   - Text organization comes from whatever attracts attention
   - No story macrostructure
   - No relationship or organization among elements or individual microstructures
2. **Sequences**
   - Narrative has macrostructure with central character, setting, topic
   - Activities of central character occur in particular setting
   - Story elements are related to central macrostructure through concrete associative, or perceptual bonds
   - Superficial sequences in time
   - No transitions
   - May use format A does X, A does Y, A does Z; or A does X to N, A does X to O, A does X to P
   - No ending to narrative
   - Trip stories may be in this category if events lack logical sequence or trip theme
3. **Primitive Narratives**
   - Characters, objects, or events of narratives are put together because they are perceptually associated and complement each other
   - Elements of the narrative follow logically from attributes of the center
   - Attributes of the center are internal to the character, objects, events, and they determine the types of events that occur
   - May use inference in narrative
   - Narrative goes beyond perceptual and explicit information, but stays concrete, with links forged by shared situation rather than abstract relationship
   - May talk about feelings
   - Organized trip stories fall in this category if they include multiple comments on events, including interpretive feelings
4. **Unfocused Chains**
   - Events are linked logically (cause-effect relationship)
   - Elements are related to one another
   - No central theme or character, no plot or story theme
   - Lack of evidence of complete understanding of reciprocal nature of characters and events
   - True sequence of events

(continues)

Table 2.2 *Continued.*

5. **Focused Chains**
   - Organized with both a center and a sequence
   - Actual chaining of events that connect the elements
   - Does not have a strong plot
   - Events do not build on attributes of characters
   - Characters and events of narratives seldom reach toward a goal
   - Weak ending, no ending, or end does not follow logically from the beginning
   - May be problems or motivating events that cause actions
   - Transitions are used
   - More because-then chains are used
   - May be a trip story if the events follow logically from each other more than just occurring next on the same trip
6. **True Narratives**
   - Integrate chaining events with complementary centering of the primitive narrative
   - A developed plot
   - Consequent events build out of prior events and also develop the central core
   - Ending reflects or is related to the issues or events presented in the beginning of the narrative
   - Intentions or goals of characters are dependent on attributes and feelings

Note. From "Development of the Concept of Story in Narratives Written by Older Children," by N. W. Nelson and K. K. Friedman, in *Childhood Language Disorders in Context: Infancy Through Adolescence* (p. 430), by N. W. Nelson, 1993, Needham Heights, MA: Allyn & Bacon.

TABLE 4.7

DEVELOPMENTAL MILESTONES OF NARRATIVE PRODUCTION USED FOR MACROSTRUCTURE*

Developmental Age	Personal and Fictional Narratives	Narrative Level	Story Structure Level
About 2 years	Children embed narratives in adult-child conversations, with basic elements of narrative structure but no identifiable high point.	Heaps and sequences, and centering	
About 3 years	Children can produce verbal descriptions of temporally organized general knowledge about routine events; children can independently report memories of past specific episodes with little support (i.e., questions and cues); no identifiable high point.	Primitive narrative and unfocused chain	Descriptive and action sequences; more likely if retelling than generating a story
About 4 years	Children's narratives have no identifiable high point; 13% of personal narratives incorporate goal-directed episodes.	Focused chains	Complete episodes in 16% of 4 year olds' stories; reactive sequences
About 5 years	42% of 5-year-old children incorporate goal-directed episodes; 93% of stories by children 5 and older have a central focus or high point; children end narratives at the high point.	True narratives	Earlier story structure levels still occur; some complete episodes may occur. In fictional stories, children include setting information and may attempt to develop a plot;
About 6 years	After age 5 years, children build to a high point and resolve it in classic form.		Abbreviated episode
Around 7–8 years	Children use codas to tie personal narratives together; children use introducers in elicited personal narratives.	Narrative summaries	60% of 8 year olds' stories are complete episodes. Stories include internal goals, motivations, and reactions that are largely absent in stories produced by younger children; some episodes will be incomplete. Multiple episodes
Around 11 years/ 5th grade	Children tell coherent, goal-based, fictional stories, although reference to internal states is still rare; 10 years olds may be limited in number of embedded or interactive episodes they can handle when retelling a story.	Complex narratives	Complex episode Embedded episode Interactive episode
Around 13 years		Analysis and generalization	

*Note that information is based on narrative generation, not retelling unless specified.

Sources: Hedberg and Westby (1993); Hudson and Shapiro (1991); Kemper (1984); Peterson and McCabe (1983)

Pragmatic Check-List

Students Name: _____

Settings: _____

_____

I. INTERACTIONAL SKILLS ("how")	Verbal	Other
A. Sequential Organization		
1. Openings - establish eye contact		
2. Initiation - speaking to person		
3. Attending to Speaker - attentive listener		
5. Appropriate Responding - answering questions		
6. Speaker Selection - acknowledging another as speaker in group		
7. Appropriate Interruptions - "excuse me"		
8. Closings - appropriately		
B. Coherent		
1. Establishing Topic - indirectly suggesting a subject of shared interest		
2. Maintaining Topic - participating		
3. Back channeling - small words used to indicate they are listening ("oh", "I see")		
4. Accompaniments - requests to continue topic of conversation		
5. Conversational Questions - to initiate & maintain conversation		
6. Sequencing - ability to follow temporal events/order of subject importance		
7. Chunking - conjunctions		
8. Signaling Topic Shifts - closing topic		
C. Repair		
1. Clarification - request or giving more detailed information		
D. Roles		
1. Politeness Markers/Tact - don't impose on listener		
2. Communication Distance		
3. Register Shifts - switch codes as needed - relate to audience		
II. INTENTS ("why")		
A. Requests		
1. Yes/No Questions		
2. Wh Questions		
3. Action Requests		
4. Permission Requests		
5. Object Request		

Pragmatic Check-List (pg. 2)

	Verbal	Other
B. Responses		
1. Yes/No Answers		
2. Wh- Answers		
3. Agreements		
4. Compliances - comply w/ or refusing to comply		
5. Qualifications - supplying unexpected information		
6. Imitations - part or whole repetitions of prior utterances		
C. Descriptions		
1. Greetings		
2. Identifications - labeling object, person, event, situation		
3. Possessions - indicating ownership		
4. Events - actions, processes described		
5. Properties - observable traits or conditions of objects, events, situations		
6. Locations - location or direction of an object or event		
7. Times - times are reported		
D. Statements		
1. Rules - express rules, conventional procedures, analytic facts, definitions or classifications		
2. Evaluations - impressions, attitudes, judgments about objects, events, situations		
3. Internal Reports - emotions, sensations, mental events, including intents to perform future acts		
4. Attributions - beliefs about another's internal state, capacity or intents		
5. Predicting - beliefs about future actions, events, situations		
6. Explanations - reasons, causes, predictions		
7. Hypothesizing - attempt to explain assumptions or verifiable future facts		
E. Acknowledgments		
1. Acceptances - neutrally recognize answers or non-requests		
2. Approval/Agreements - positively recognize answers or non-requests		
3. Disapproval/Disagreements - negatively evaluates answers or non-requests		
F. Performatives		
1. Role-Plays - establish a fantasy		
2. Protests - object to listeners previous behavior		
3. Game - Markers - initiate, maintain, or end a game		
4. Jokes		
5. Claims - establish rights by being said ("that's my cookie")		
6. Warnings - alert listener to impending harm		
7. Teases - annoy, provoke, taunt		
G. Miscellaneous		
1. Uninterpretable - unintelligible, incomplete, or anomalous utterances		
2. Exclamations - emotional reactions		

Mountain Board of Cooperative Educational Services
Speech-Language Checklist

Student _____ Teacher _____ Grade _____ Date _____

Please assign values based on observations of this student. Assign the most appropriate value based on child's **actual ability**, not his/her *choice* of participation and add any comments. Thank-you.

—1—	—2—	—3—	—4—	—5—
Inadequate	Minimally Adequate	"Borderline"	Adequate	Above Adequate

Rating:

RECEPTIVE LANGUAGE

_____ Able to follow verbal directions.
_____ Comprehension of information (does he/she say "huh" or "what" frequently).
_____ Attention span.
_____ Need for clarification and/or repetition of a direction(s).
_____ Listening / attending abilities.
_____ Ability to answer questions appropriately (rather than repeating what has been said).
_____ Memory / comprehension of verbal information provided in class.
_____ Memory for routines and following directions.

EXPRESSIVE LANGUAGE

_____ Participation in discussions.
_____ Use of complete thoughts when speaking.
_____ Use of correct sentence structure and grammar.
_____ Use of logical sequence of ideas to tell a story or relate events.
_____ Ability to verbalize in a fluent manner (does not get stuck on choice of words).
_____ Use of speaking vocabulary.
_____ Verbal communication understandable.

SOCIAL COMMUNICATION SKILLS

_____ Ability to carry on a meaningful conversation with adults/peers.
_____ Begins, maintains, and ends conversation appropriately.
_____ Makes relevant comments on the topic.
_____ Attends to speaker - maintains eye contact.
_____ Understands humor, idioms, and other figurative language.

OTHER POSSIBLE CONTRIBUTING FACTORS, CHECK IF APPROPRIATE:

____ emotional ____ chronological age ____ vocational ____ health ____ bilingual
____ social ____ mental age ____ academic performance ____ other

COMMENTS:

Please return to: _____ Speech-Language Pathologist
by _____ Date

Figure 10. TEACHER CHECKLIST - LISTENING COMPREHENSION

STUDENT _____ DATE _____ SCHOOL _____

DATE OF BIRTH _____ GRADE _____ TEACHER _____

YES	NO	SOMETIMES	THE STUDENT:
____	____	____	1. Enjoys having stories read aloud
____	____	____	2. Has an attention span for verbal presentation adequate for age level
____	____	____	3. Attends to all of what is said rather than "tuning out" portions
____	____	____	4. Is able to ignore auditory distractions
____	____	____	5. Faces source of sound directly; does not tilt one ear toward teacher or other source
____	____	____	6. Responds after first presentation; does not often ask for things to be repeated
____	____	____	7. Understands materials presented through the auditory channel (lecture) as easily as those presented through the visual channel (written/drawn)
____	____	____	8. Responds to questions within expected time period
____	____	____	9. Follows two- or three-step directions
____	____	____	10. Demonstrates understanding (verbally or nonverbally) of the main idea of a verbal presentation
____	____	____	11. Comprehends who, what, when, where, why, and how questions appropriate for age level
____	____	____	12. Demonstrates understanding of vocabulary appropriate for age level
____	____	____	13. Discriminates likenesses and differences in words (toad-told) and sounds (t-d)
____	____	____	14. Demonstrates understanding of temporal (before/after), position (above/below), and quantitative (more/several) concepts
____	____	____	15. Understands subtleties in word or sentence meaning (idioms, figurative language)
____	____	____	16. Interprets meaning from vocal intonation
____	____	____	17. Understands a variety of sentence structures (cause-effect passive voice: The ball was bounced by the girl.) and clauses (clause that modifies the subject: The dog that chased the cat was hit.)

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Figure 14. TEACHER CHECKLIST - READING COMPREHENSION

STUDENT _____ DATE _____ SCHOOL _____

DATE OF BIRTH _____ GRADE _____ TEACHER _____

YES	NO	SOMETIMES	THE STUDENT:
____	____	____	1. Orients book in proper position and turns pages left to right
____	____	____	2. Attempts to read, using retelling and remembering text
____	____	____	3. Recognizes common words in stories
____	____	____	4. Begins to use phonetic cueing system
____	____	____	5. Uses decoding skills a. uses common vowels and consonant sounds and patterns b. applies rules of syllabication c. demonstrates knowledge of prefixes, suffixes, and compound words d. uses context clues
____	____	____	6. Recognizes previously taught vocabulary in print (sight and reading vocabulary)
____	____	____	7. Comprehends simple sentence structure
____	____	____	8. Comprehends complex sentence structure a. understands passive voice (Mice were eaten by the cat.) b. understands relative clauses (the cake that Mac ate) c. understands direct and indirect quotes within a passage d. understands pronoun reference (he = Billy)
____	____	____	9. Recognizes different uses of words, depending on context a. recognizes meanings of antonyms and synonyms b. recognizes multiple meanings (fly: a fly, to fly) c. understands figurative language (hold your horses) d. differentiates homonyms (rode-road)
____	____	____	10. Comprehends age- and/or grade-appropriate passages a. summarizes a story or passage b. identifies the main idea of a selection c. identifies supporting details d. compares and contrasts stories, characters, events, etc.
____	____	____	11. Uses printed materials for a variety of purposes a. makes and confirms predictions b. understands author's purpose c. locates details and facts to answer questions and draw conclusions d. uses printed material to gather information (for reports, personal interest, etc.) e. evaluates quality of material to meet a given purpose f. reads for pleasure
____	____	____	12. Comprehends material from a variety of sources (newspaper, magazine, content area text, trade books, reference materials)
____	____	____	13. Follows a sequence of written directions to complete a task (work sheet directions, recipes, directions for building a model)

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Figure 12. TEACHER CHECKLIST - ORAL EXPRESSION

STUDENT _____ DATE _____ SCHOOL _____

DATE OF BIRTH _____ GRADE _____ TEACHER _____

YES	NO	SOMETIMES	THE STUDENT:
____	____	____	1. States identifying information: name ( ), age ( ), birthday ( ), phone number ( ), and family information ( )
____	____	____	2. Uses correct grammatical structure for variety of purposes a. formulates sentences correctly b. uses subject/verb appropriately c. uses verb tenses appropriately d. asks questions correctly: yes/no ( ) and "wh" questions ( ) e. answers questions correctly: yes/no ( ) and "wh" questions ( ) f. uses negation correctly g. uses pronouns correctly: personal ( ), demonstrative [this/that] ( ), reflexive [herself, myself] ( ) h. formulates plurals correctly: regular ( ) and irregular ( )
____	____	____	3. Labels common objects correctly
____	____	____	4. Uses age appropriate vocabulary
____	____	____	5. Uses appropriate location ( ), temporal ( ), and quantitative ( ) expressions for age level (e.g., above/below, before/after, more/several)
____	____	____	6. Makes eye contact when speaking
____	____	____	7. Carries on a conversation with appropriate voice level
____	____	____	8. Knows how to begin, maintain, and end a conversation
____	____	____	9. Restates thoughts in alternative form
____	____	____	10. Tells stories or relates information in the proper sequence with beginning, middle, and/or end
____	____	____	11. Uses speech rather than gestures to express self
____	____	____	12. Speaks easily without seeming to be frustrated
____	____	____	13. Accounts for listener's shared background when formulating expression (e.g., uses pronouns and articles only with clear referents; gives enough information about the topic)
____	____	____	14. Responds correctly to humor ( ), sarcasm ( ), and figures of speech ( )
____	____	____	15. Recognizes when to match voice level and intonation to a variety of situations a. place (playground, classroom, assembly) b. intent (question/answer in class, show emotions, give reports)

Ohio Department of Education (1991). Ohio handbook for the identification, evaluation, and placement of children with language problems. Used with permission.

Figure 16. TEACHER CHECKLIST - WRITTEN EXPRESSION

STUDENT _____ DATE _____ SCHOOL _____

DATE OF BIRTH _____ GRADE _____ TEACHER _____

YES	NO	SOMETIMES	THE STUDENT:
____	____	____	1. Follows left-to-right orientation
____	____	____	2. Copies materials correctly from board and desk
____	____	____	3. Uses correct spacing for letters ( ) and words ( )
____	____	____	4. Writes fluently; is not slow and labored
____	____	____	5. Uses a variety of sentence structures
____	____	____	6. Recognizes own letter/numeral reversals
____	____	____	7. Uses correct spelling in daily work
____	____	____	8. Uses correct capitalization and punctuation in daily work
____	____	____	9. Uses correct grammar in written work a. uses plurals correctly: regular ( ) and irregular ( ) b. uses subject and verb appropriately c. expresses questions correctly: yes/no ( ) and "wh-" questions ( ) d. uses negation correctly e. uses pronouns correctly: personal ( ), demonstrative ( ), and reflexive ( )
____	____	____	10. Uses writing to communicate information a. provides reader with appropriate amount of information (detail, background, context) b. uses appropriate degree of familiarity (e.g., business vs. friendly letter) c. approaches written tasks in prescribed format, using appropriate conventions (e.g., fiction, informational, requesting, personal)
____	____	____	11. Uses content skills appropriately a. writes about a single event, experience, or point of view b. adds descriptive detail c. expresses original ideas, humor, and imagination
____	____	____	12. Evidences overall organizational pattern in written composition a. sequences events or points logically within paragraphs and/or composition b. reports a clear beginning, middle, and end c. uses topic statements and maintains topic d. uses age-appropriate vocabulary e. avoids fragments and run-on sentences f. presents details and facts to develop and support the main idea
____	____	____	13. Uses effective writing process a. pre-writing activities (e.g., topic choice) b. demonstrates use of drafting c. uses proofing skills (e.g., precise phrasing) d. uses editing/self-correction skills e. shares written work (e.g., peer editing)

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APPENDIX G

CULTURALLY AND LINGUISTICALLY DIVERSE POPULATIONS NORMATIVE INFORMATION

Bilingual Classroom Communication Profile

Celeste Roseberry-McKibbin, Ph.D., CCC

Name: _____ Date of Birth:_____ Age:_____

Home Address:_____Telephone: _____

School:_____ Teacher:_____ Grade:_____

Place of Birth:_____ Parent's Name:_____Work Phone: _____

Background Information

Individuals residing in the home with the student and their relationship to the student:

Countries where student has resided:

Country	Time Period of Residence

First language or languages learned by the student:_____

Language used most often by the student: at home_____ at school_____

Individuals responsible for caring for the student:

Name	Relationship	Language(s) Spoken

Date and circumstances of student's first exposure to English:

Previous schools attended:

School	Location	Dates of Attendance

Comments about school attendance:

Other relevant background information:

Health Information

Hearing Screening Results:_____

Vision Screening Results:_____

Health Concerns:_____

Instructional Strategies

Special programs in the regular classroom (e.g., tutors, ESL, etc.):

Current classroom modifications (e.g., preferential seating, special materials used, etc.):

Classroom Language Use

Instructions: Evaluate the student's performance in each area by responding *"Yes," "No,"* or *"Don't Know"* to each item.

	English			Home Language		
	Yes	**No**	**Don't Know**	**Yes**	**No**	**Don't Know**
1. Answers simple questions about everyday activities	___	___	___	___	___	___
2. Communicates basic needs to others	___	___	___	___	___	___
3. Interacts appropriately and successfully with peers	___	___	___	___	___	___
4. Tells a simple story, keeping the sequence and basic facts accurate	___	___	___	___	___	___
5. Communicates ideas and directions in an appropriate sequence	___	___	___	___	___	___
6. Describes familiar objects and events	___	___	___	___	___	___
7. Maintains a conversation appropriately	___	___	___	___	___	___

Comments:

School Social Interaction Problems

Instructions: Write a plus (+) if the statement is true and a minus (–) if the statement is false. Your responses should be based on observations of the student during interactions with peers from a similar cultural and linguistic background.

___Communicates ineffectively with peers in both English and the home language

___Often plays alone

___Is ridiculed or teased by others

___Is often excluded from activities by peers

___Does not get along well with peers

Comments:

Language and Learning Problems

Instructions: Indicate whether the student has difficulties in the areas below by responding *"Yes," "No,"* or *"Don't Know"* to each item.

	Yes	No	Don't Know
Overall Performance Summary			
1. Appears to have difficulty **communicating** in English	___	___	___
2. Appears to have difficulty **communicating** in the primary language	___	___	___
3. Has difficulty **learning** when instruction is provided in **English**	___	___	___
4. Has difficulty **learning** when instruction is provided in the **primary language**	___	___	___
5. Acquires new skills in **English** more slowly than peers	___	___	___
6. Acquires new skills in the **primary language** more slowly than peers	___	___	___
7. Shows academic achievement significantly below his/her academic English language proficiency, as assessed by an ESL or bilingual professional	___	___	___
8. Is not learning as quickly as peers who have had similar language experiences and opportunities for learning	___	___	___
9. Has a family history of learning problems or special education concerns	___	___	___
10. Parents state that student learns language more slowly than siblings	___	___	___
Specific Problems Observed			
11. Rarely initiates verbal interaction with peers	___	___	___
12. Uses gestures and other nonverbal communication (on a regular basis) rather than speech to communicate	___	___	___
13. Is slow to respond to questions and/or classroom instructions	___	___	___
14. Is not able to stay on a topic; conversation appears to wander	___	___	___
15. Often gives inappropriate responses	___	___	___
16. Appears to have difficulty remembering things	___	___	___
17. Does not take others' needs or preferences into account	___	___	___
18. Has difficulty conveying thoughts in a clear, organized manner	___	___	___
19. Appears disorganized much of the time	___	___	___
20. Appears confused much of the time	___	___	___
21. Has difficulty paying attention even when material is understandable and presented using a variety of modalities	___	___	___
22. Has difficulty following basic classroom directions	___	___	___
23. Has difficulty following everyday classroom routines	___	___	___
24. Requires more prompts and repetition than peers to learn new information	___	___	___
25. Requires a more structured program of instruction than peers	___	___	___
26. Has gross and/or fine motor problems	___	___	___

Environmental Influences and Language Development

Instructions: Indicate whether the student has difficulties in the areas below by responding *"Yes," "No,"* or *"Don't Know"* to each item.

	Yes	No	Don't Know
1. Has the student had frequent exposure to literacy-related materials (e.g., books) in the primary language?	___	___	___
2. Has the student had sufficient exposure to the primary language to acquire a well-developed vocabulary in that language?	___	___	___
3. Was the student a fluent speaker of the primary language when he/she was first exposed to English?	___	___	___
4. Have the student's parents been encouraged to speak and/or read in the primary language at home?	___	___	___
5. Has the student's primary language been maintained in school through bilingual education, tutoring, or other language maintenance activities?	___	___	___
6. Does the student show an interest in interacting in his/her primary language?	___	___	___
7. Has a loss of proficiency in the primary language occurred because of limited opportunities for continued use of that language?	___	___	___
8. Doe the student have frequent opportunities to speak English during interactions with peers at school?	___	___	___
9. Has the student had frequent opportunities to visit libraries, museums, and other places in the community where opportunities for language enrichment and learning are available?	___	___	___
10. Has the student had frequent, long-term opportunities to interact with fluent English speakers outside of the school environment?	___	___	___

Impressions from Classroom Observations

1. To what extent does the student have difficulty learning in school because of limited proficiency in English?

2. Do you feel that this student requires a different type of instructional program than other students who have had similar cultural and linguistic experiences? Please explain.

3. Briefly summarize the communication and learning problems observed in the school setting.

Table 5.1

CHARACTERISTICS OF AFRICAN AMERICAN LANGUAGE MORPHOLOGY AND SYNTAX

AAL Feature/Characteristic	Mainstream American English	Sample AAL Utterance
Omission of noun possessive	That's the woman's car It's John's pencil.	That ***the woman*** car. It ***John*** pencil.
Omission of noun plural	He has 2 boxes of apples. She gives me 5 cents.	He got 2 ***box*** of ***apple***. She give me 5 ***cent***.
Omission of third person singular present tense marker	She walks to school. The man works in his yard.	She ***walk*** to school. The man ***work*** in his yard
Omission of "to be" forms such as "is, are"	She is a nice lady. They are going to a movie.	***She a*** nice lady. ***They going*** to a movie
Present tense "is" may be used regardless of person/number	They are having fun. You are a smart man.	***They is*** having fun. ***You is*** a smart man!
Utterances with "to be" may not show person number agreement with past and present forms	You are playing ball. They are having a picnic.	You ***is*** playing ball. They ***is*** having a picnic.
Present tense forms of auxiliary "have" omitted	I have been here for 2 hours. He has done it again.	I been here for 2 hours. He done it again.
Past tense endings may be omitted	He lived in California. She cracked the nut.	He ***live*** in California. She ***crack*** the nut.
Past "was" may be used regardless of number and person	They were shopping. You were helping me.	They ***was*** shopping. You ***was*** helping me.

Source: Roseberry-McKibbin, C., Multicultural Students with Special Language Needs. Oceanside CA: Academic Communication Associates, 1995, pp. 50-51.

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AAL Feature/Characteristic	Mainstream American English	Sample AAL Utterance
Multiple negatives (each additional negative form adds emphasis to the negative meaning)	We don't have any more. I don't want any cake. I don't like broccoli.	We don't have no more. I don't never want no cake. I don't never like broccoli.
"None" may be substituted for "any"	She doesn't want any.	She don't want **none**.
Perfective construction; "been" may be used to indicate that an action took place in the distant past.	I had the mumps when I was 5. I have known her for years.	I **been had** the mumps when I was 5. I **been known** her.
"Done" may be combined with a past tense form to indicate that an action was started and completed	He fixed the stove. She tried to paint it.	He **done fixed** the stove. She **done tried** to paint it.
The form "be" may be used as the main verb.	Today she is working. We are singing.	Today **she be** working. **We be** singing.
Distributive "be" may be used to indicate actions and events over time	He is often cheerful. She's kind sometimes.	**He be** cheerful. **She be** kind.
A pronoun may be used to restate the subject	My brother surprised me. My dog has fleas.	My brother, **he** surprise me. My dog, **he** got fleas.
"Them" may be substituted for "those"	Those cars are antiques. Where'd you get those books?	Them cars, they be antique. Where you get **them books**?
Future tense "is, are" may be replaced by "gonna"	She is going to help us. They are going to be there.	She **gonna** help us. They **gonna** be there.
"At" is used at the end of "where" questions	Where is the house? Where is the store?	Where is the house **at**? Where is the store **at**?
Additional auxiliaries are often used	I might have done it.	I **might could have** done it.
"Does" replaced by "do"	She does funny things It does make sense.	**She do** funny things. **It do** make sense.

Table 5.2

CHARACTERISTICS OF AFRICAN AMERICAN LANGUAGE, ARTICULATION, AND PHONOLOGY

AAL Feature/Characteristic	Mainstream American English	African American Language
/l/ phoneme lessened or omitted	tool	too'
	always	a'ways
/r/ phoneme lessened or omitted	door	doah
	mother	mudah
	protect	p'otek
f/voiceless "th" substitution at end or middle of word	teeth	teef
	both	bof
	nothing	nufin'
t/voiceless "th" substitution in beginning of a word	think	tink
	thin	tin
d/voiced "th" substitution at the beginning, middle of words	this	dis
	brother	broder
v/voiced "th" substitution at the end of words	breathe	breave
	smooth	smoov
consonant cluster reduction	desk	des'
	rest	res'
	left	lef'
	wasp	was'
Differing syllable stress patterns	guitar	**gui** tar
	police	**po** lice
	July	**Ju** ly

Source: Roseberry-McKibbin, C., Multicultural Students with Special Language Needs. Oceanside CA: Academic Communication Associates, 1995, pp. 53-54.
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AAL Feature/Characteristic	Mainstream American English	African American Language
Verbs ending in /k/ are changed	liked walked	li-tid wah-tid
Metathesis occurs	ask	aks ("axe")
Devoicing of final voiced consonants	bed rug cab	bet ruk cap
Final consonants may be deleted	bad good	ba' goo'
I/E substitution	pen ten	pin tin
b/v substitution	valentine vest	balentine bes'
dipthong reduction	find oil pound	fahnd ol pond
n/ng substitution	walking thing	walkin' thin'

Note: *Characteristics may vary depending on variables such as geographic region.*

Table 6.1
Some Important Features Shared by Ebonics and Standard American English

Vocabulary	Word order	Stress and intonation
Conjunctions	Gender	Clauses
Tense	Number	Modifiers
Prepositions	Person	Question types

Note. Adapted from *Black English in the United States and the Caribbean,* by L. Cole, 1995 (December), paper presented at the annual meeting of the American Speech-Language-Hearing Association, Orlando, FL.

Table 6.2
Features Required in Standard American English, but Non-obligatory in Ebonics

1. Count nouns need not be pluralized by adding *-s* or *-es*. Pluralization can be denoted by a number or other linguistic cue.

   Example: six desk

2. Possession need not be marked by *-'s* or *-s'*.

   Example: Tom aunt

3. There is no need to mark past tense when the verb ends with a consonant cluster, such as the *-st* in *west*, *-nd* in *find*, or *-ld* in *cold*.

   Example: He hand me the plate.

   When the verb ends with *-t* or *-d* and is followed by an infinitive phrase or a participle, the final consonant is dropped and the *-ed* reduced to simply *d*.

   Example: They started playing. (Remove final *-t* sound and omit *i* sound.)

   They stard playing.

4. *Is* and *are* are optional in content questions and interrogative reversals, but the question intonation is retained.

   Examples: It a big house?
   That your house?

Note. Adapted from *Black English in the United States and the Caribbean,* by L. Cole, 1995 (December), paper presented at the annual meeting of the American Speech-Language-Hearing Association, Orlando, FL.

Fahey, K.R., & Reid, D.K. (2000). Language development, differences, and disorders: A Perspective for general and special education teachers and classroom-based speech-language pathologists. Austin, TX: Pro Ed.

Table 6.3

Irregular Standard American English Forms Regularized in Ebonics

1. In SAE, speakers add *-s* to the third-person singular, as in "He walks." That marker is redundant, because we know from *he* that the verb is in the third-person singular form. Ebonics regularizes the verb form, dropping the *-s*.

   Example: I talk, you talk, he talk, we talk, you talk, they talk

2. Similarly, use of the verb *to be* in the past tense shifts from *was* to *were* in all but the first- and third-person singular forms. Again the shift denotes a double, or redundant, marking, because of the presence of the pronoun. Ebonics regularizes the form.

   Example: I was, you was, he was, we was, you was, they was

3. In SAE, there are two forms of the indefinite article: *a* and before a vowel *an*. Ebonics regularizes the form.

   Example: a angle

4. In SAE, reflexive pronouns are formed by adding the syllable *self* to the possessive pronoun (e.g., *myself, yourself*), except for the third-person singular and plural forms in which the objective form of the pronoun is used (e.g., *himself, itself, themselves*). In Ebonics, those forms are regularized.

   Example: myself, yourself, herself, himself, itself, ourself, themself

5. In SAE, *those* is the demonstrative pronoun used in subjects and *them* is the form used as an object. In Ebonics, only the form *them* is used.

   Example: them apples

6. In SAE, all pronouns indicate number (e.g., *I, she, he, it, we, they*) except the second person in which *you* is used to indicate both singular and plural. In Ebonics, the form is regularized.

   Example: you (singular form), you all (plural form)

Note. Adapted from *Black English in the United States and the Caribbean,* by L. Cole, 1995 (December), paper presented at the annual meeting of the American Speech-Language-Hearing Association, Orlando, FL.

Table 6.4

Features Roughly Equivalent in Standard American English and Ebonics

1. In the first-person singular future, the forms *going to* or *gonna* replace the verb *will*. In Ebonics, *I'm gonna* often becomes contracted to *I'ma* or *I'mo*.

2. In SAE, to form the negative of the verb *to be* or auxiliary verbs, such as *have, not* is added in contracted or uncontracted forms: *am not, hasn't*. In Ebonics, *ain't* is often substituted.

   Examples: I ain't goin.

   He ain't told me nothin.

3. In SAE, double negatives are not permissible; in Ebonics the more negatives, the more negative the meaning.

   Example: I ain't gonna go no more no how!

4. In SAE, a clause that raises a question is embedded by changing it to its declarative form (e.g., The question "Is it raining?" becomes the statement, "It is raining") and then adding the word *if* or *whether* (e.g., "He wondered if it is raining"). In Ebonics, the question is simply added, without the transformation to a statement and without the use of a subordinator (i.e., *if* or *whether*).

   Example: He wanna know is it rainin.

5. In SAE, the verb *to be* can be replaced by the verb *to go* to indicate a change in location (e.g., "Here we go." "There goes the bus."). In Ebonics, *go* can be substituted without implying a change in location.

   Example: Here we go. (meaning "Here we are.")

   There go the store. (meaning "There is the store.")

6. In SAE, the superlative is formed by adding *-est* or by the formation of an adverbial phrase (e.g., *very fast*). In Ebonics, reduplication is used.

   Example: Sam run fast-fast-fast.

   Some days it cold-cold.

Note. Adapted from *Black English in the United States and the Caribbean,* by L. Cole, 1995 (December), paper presented at the annual meeting of the American Speech-Language-Hearing Association, Orlando, FL.

Fahey, K.R., & Reid, D.K. (2000). Language development, differences, and disorders: A Perspective for general and special education teachers and classroom-based speech-language pathologists. Austin, TX: Pro Ed. Reprinted with permission.

Table 6.5
Ebonics Forms for Which There Are No Standard American English Equivalents

1. In SAE, aspect—the distribution of an action or state across points in time—is denoted by the use of an adverb (e.g., *sometimes, frequently*) or an adverbial phrase (e.g., *most of the time*). In Ebonics, *be* is used to denote a state or action intermittently distributed over time.

   Example: He be talking on the phone.
   (meaning "He frequently talks on the phone.")

2. In SAE, speakers use *has* or *have* to show that an event or state that began in the past continues to have an effect in the present (e.g., "He has had that car for a very long time"). In Ebonics, the form *been* is used as an auxiliary verb.

   Example: He been had that car.

3. In SAE, the use of *at* at the end of a question that begins with *where* is considered redundant. In Ebonics, it is used at the end of a question that begins with *where* and at the end of an embedded question formed with *where*.

   Example: Where is my jacket at?
   I wonder where my jacket is at?

4. There are some forms in Ebonics that are considered overcorrections of SAE forms.

   Examples: childrens (which is plural without the *-s*)
   mine's (which is possessive without the *-'s*)

Note. Adapted from *Black English in the United States and the Caribbean*, by L. Cole, 1995 (December), paper presented at the annual meeting of the American Speech-Language-Hearing Association, Orlando, FL.

Fahey, K.R., & Reid, D.K. (2000). Language development, differences, and disorders: A Perspective for general and special education teachers and classroom-based speech-language pathologists. Austin, TX: Pro Ed. Reprinted with permission.

Table 6.1

LANGUAGE DIFFERENCES COMMONLY OBSERVED AMONG SPANISH SPEAKERS

Language Characteristics	Sample English Utterances
1. Adjective comes after noun.	The house green
2. 's is often omitted in plurals and possessives.	The girl book is... Juan hat is red.
3. Past tense *–ed* is often omitted.	We walk yesterday.
4. Double negatives are required.	I don't have no more.
5. Superiority is demonstrated by using *mas.*	This cake is more big.
6. The adverb often follows the verb.	He drives very fast his motorcycle.

Source: Roseberry-McKibbin, C. Multicultural Students with Special Language Needs. Oceanside, CA: Academic Communication Associates, 1995, p.67.

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Table 6.2

ARTICULATION DIFFERENCES COMMONLY OBSERVED AMONG SPANISH SPEAKERS

Articulation Characteristics	Sample English Patterns
1. /t, d, n/ may be dentalized (tip of tongue is placed against the back of the upper central incisors).	
2. Final consonants are often devoiced	dose/doze
3. b/v substitution	berry/very
4. Deaspirated stops (sounds like speaker is omitting the sound because it is said with little air release).	
5. ch/sh substitution	Chirley/Shirley
6. d/voiced th, or z/voiced th (voiced "th" does not exist in Spanish).	dis/this, zat/that
7. t/voiceless th (voiceless "th" does not exist in Spanish).	tink/think
8. Schwa sound inserted before word initial consonant clusters	eskate/skate espend/spend
9. Words can end in 10 different sounds: a, e, i, o, u, l, r, n, s, d	may omit sounds at the ends of words
10. When words start with /h/, the /h/ is silent	'old/hold, 'it/hit
11. /r/ is tapped or trilled (tap /r/ might sound like the tap in the English word "butter;")	
12. There is no /j/ (e.g., judge) sound in Spanish; speakers may substitute "y"	Yulie/Julie yoke/joke
13. Frontal /s/–Spanish /s/ is produced more frontally than English /s/.	Some speakers may sound like they have frontal lisps.
14. The ñ is pronounced like a "y" (e.g. "baño is pronounced "bahnyo").	
Spanish has 5 vowels: a, e, i, o, u (ah, E, ee, o, u) and few diphthongs. Thus, Spanish speakers may produce the following vowel substitutions:	
15. ee/I substitution	peeg/pig, leetle/little
16. E/ae, ah/ae substitutions	pet/pat Stahn/Stan

Source: Roseberry-McKibbin, C. Multicultural Students with Special Language Needs. Oceanside, CA: Academic Communication Assoicates, 1995, p.68. Reprinted with Permission.

Table 6.6
Hispanic American English

Phonological Differences

Hispanic American English	Standard American English
beeg	big
cet	cat
cot	cut
choe	shoe
butch	bush
soo	zoo
tum	thumb
dough	though
ban	van
rin	ring
sin	sing
gick	kick
lok	log

Syntactic Differences

1. The verb *to be* is eliminated.
   Example: He goin.
2. *Has* and *have* are substituted for *to be*.
   Example: He has 8 year.
3. The third-person singular present is regularized.
   Example: He talk.
4. Past-tense marker is omitted.
   Example: I work yesterday. (meaning "I worked yesterday.")
5. Adverbs of place are put close to the verb.
   Example: He put below the pot.
6. Use of adjectives rather than the comparative *(-er)* and superlative *(-est)* forms.
   Example: more big
7. Subject pronouns are frequently omitted, when the meaning is clear without it.
   Example: Bob got a car. I think will like it.
8. Articles are often omitted.
   Example: He is handsome kid.
9. *Do* is omitted in questions.
   Example: You want to go?
10. *No* is used as the form of the negative.
    Example: No leave the room.

Note. Adapted from *Language Disorders: A Functional Approach to Assessment and Intervention* (3rd ed.), by R. E. Owens, 1999, Needham Heights, MA: Allyn & Bacon. Copyright 1999 by Allyn & Bacon. Adapted with permission.

Fahey, K.R., & Reid, D.K. (2000). Language development, differences, and disorders: A Perspective for general and special education teachers and classroom-based speech-language pathologists. Austin, TX: Pro Ed.

Table 1
Sounds of Spanish

Manner	Place	Voiceless	Voiced
Affricate	Palatal	/ch/	
Fricative	Alveolar	/s/	
	Bilabio-Velar		/w/
	Labiodental	/f/	
	Palatal		/y/
	Velar	/x/	
Lateral	Alveolar		/l/
Nasal	Alveolar		/n/
	Bilabial		/m/
	Palatal		/ñ/
Stop	Bilabial	/p/	/b/
	Dental	/t/	/d/
	Velar	/k/	/g/
Tap	Alveolar		/r/
Trill	Alveolar		/rr/

Note: **The velar fricative /x/ is replaced by the glottal fricative /h/ in some dialects.**

Mattes, L. J. (1995). Spanish language assessment procedures (SLAP). Oceanside, CA: Academic Communication Associates, Inc. Reprinted with permission.

DEVELOPMENTAL NORMS FOR ARTICULATION

The spontaneous word production task in Section A can be used as a screening instrument in speech-language programs and in regular classrooms to identify specific speech sounds that the child has not mastered. Sections B and C provide additional information about the child's speech production that can be helpful in program planning and in the development of instructional objectives for individual children.

The spontaneous word production task has been used as a kindergarten screening measure in California public schools to identify children who may be in need of articulation therapy. When administered to 54 five-year-olds of Mexican descent in bilingual kindergarten classrooms, consonants produced correctly by less than 90% of the sample were limited to the phonemes below:

1. /r/ in all word positions
2. /rr/ in all word positions.
3. /s/ in all word positions.
4. /x/ in initial word position.
5. /d/ in final word position.

Omission of the final /d/ sound is common, even among adult speakers, and should not be viewed as a "problem."

Several studies of Spanish phonological development have been reported in the literature (Jimenez, 1987; Melgar, 1976; Merino, 1983). Based on a review of these investigations, Merino (1992) reported the age at which Spanish speech sounds were produced correctly by 90 percent of the children:

1. By 3 years of age: ch, f, k, m, n, ñ, p, t, y
2. By 4 years of age: b, g, l, r
3. By 6 years of age: s
4. By 7 years of age: x, d, rr

When used as a kindergarten screening measure, local norms can be developed for the instrument. The development of local norms makes it possible to compare the performance of individual children with that of others in their peer group.

Although the three tasks in this section provide information that can be helpful in identifying misarticulated speech sounds, one's performance when naming pictures and imitating verbal models sometimes differs from his/her performance in conversational speech. Therefore, the assessment results should always be compared to data obtained from natural communication samples and other measures.

When administering this task, record the specific type of misarticulation that was produced (e.g., substitution of /b/ for /p/) on the speech sound matrix of the Articulation Record Form. The 18 Spanish consonants are arranged in alphabetical order on this form. Phonetic transcriptions of individual responses can be recorded in the space beside each of the target words. Space is provided at the bottom of the record form for recording misarticulations on clusters containing /r/, /s/, and /l/.

SECTION B- CONSONANT CLUSTERS

Section B of the instrument is designed for use in assessing the child's imitative production of consonant clusters containing /l/, /r/, and /s/. This task should be administered to children who misarticulate one or more of the clusters tested on the spontaneous word production task in Section A. The task is also appropriate for children who are observed to misarticulate clusters during conversational speech. The stimulus words for this task and the consonant clusters tested are listed in Section B of the Articulation Record Form.

PROCEDURE. Present each stimulus word orally to the child. The child's task is to repeat each word.

SCORING. Record specific misarticulations produced by the child in the space beside each word on the Articulation Record Form. A phonetic transcription of individual responses may also be recorded.

SECTION C- SOUNDS IN SENTENCES

Section C of the instrument is designed to assess the child's production of speech sounds in sentences. The stimulus sentences are listed on the Articulation Record Form.

PROCEDURE. Present each stimulus sentence orally to the child. The child's task is to repeat each sentence.

SCORING. Record the specific type of articulation error produced and/or phonetic transcriptions of the child's entire response. Space for recording this information is provided beside each stimulus sentence. The child's Sentence Articulation Score should then be computed in the following manner:

1. Underline all misarticulated words in the stimulus sentence.
2. Compute the total number of misarticulated words.
3. Subtract the total number of misarticulated words from 75 to obtain the child's Sentence Articulation Score.

The *Sentence Articulation Score* can be used as a baseline for individual children's instructional objectives. An example of an instructional objective based on this measure is presented below:

> By May of the current school year, Jorge's Sentence Articulation Score will increase from 61 to 65 as measured by Spanish Language Assessment Procedures (Sounds in Sentences subtest).

Table 7.1

LANGUAGE DIFFERENCES COMMONLY OBSERVED AMONG ASIAN SPEAKERS

Language Characteristics	*Sample English Utterances*
Omission of plurals	Here are 2 piece of toast. I got 5 finger on each hand.
Omission of copula	He going home now. They eating.
Omission of possessive	I have Phuong pencil. Mom food is cold.
Omission of past tense morpheme	We cook dinner yesterday. Last night she walk home.
Past tense double marking	He didn't went by himself.
Double negative	They don't have no books.
Subject-verb-object relationship differences/omissions	I messed up it. He like.
Singular present tense omission or addition	You goes inside. He go to the store.
Misordering of interrogatives	You are going now?
Misuse or omission of prepositions	She is in home. He goes to school 8:00.
Misuse of pronouns	She husband is coming. She said her wife is here.
Omission and/or overgeneralization of articles	Boy is sick. He went the home.
Incorrect use of comparatives	This book is gooder than that book.
Omission of conjunctions	You _____I going to the beach.
Omission, lack of inflection on auxiliary "do"	She _____ not take it. He do not have enough.
Omission, lack of inflection on forms of "have"	She have no money. We_____been the store.
Omission of articles	I see little cat.

Source: Roseberry-McKibbin, C. Multicultural Students with Special Language Needs. Oceanside, CA: Academic Communication Associates, 1995, p.81. Reprinted with Permission.

Table 7.2

ARTICULATION DIFFERENCES OBSERVED COMMONLY AMONG ASIAN SPEAKERS

Articulation Characteristics	*Sample English Utterances*	
In many Asian languages, words end in vowels only or in just a few consonants; speakers may delete many final consonants in English.	ste/step ro/robe	li/lid do/dog
Some languages are monosyllabic; speakers may truncate polysyllabic words or emphasize the wrong syllable.	efunt/elephant DIversity/diversity	
Possible devoicing of voiced cognates	beece/bees luff/love	pick/pig crip/crib
r/l confusion	lize/rise	clown/crown
/r/ may be omitted entirely	gull/girl	tone/torn
Reduction of vowel length in words	Words sound choppy to Americans.	
No voiced or voiceless "th"	dose/those zose/those	tin/thin sin/thin
Epenthesis (addition of "uh" sound in blends, ends of words).	bulack/black	wooduh/wood
Confusion of "ch" and "sh"	sheep/cheap	beesh/beach
/ae/ does not exist in many Asian languages	block/black	shock/shack
b/v substitutions	base/vase	Beberly/Beverly
v/w substitutions	vork/work	vall/wall
p/f substitutions	pall/fall	plower/flower

Source: Roseberry-McKibbin, C. Multicultural Students with Special Language Needs. Oceanside, CA: Academic Communication Associates, 1995, p.82. Reprinted with Permission.

Table 6.8
Characteristics of Japanese that Influence English Usage

1. Word order is flexible, because inflected endings mark the grammatical function of various words: *wa* is the subject marker, *o* the direct object marker, and *ni* the indirect object marker.

   Example: Yesterday Sue-wa Bill-ni candy-o gave.

   Sue-wa Bill-ni candy-o yesterday gave.

2. Articles are absent in Japanese and are, therefore, likely to be left out in English.

   Example: Every day he take walk.

3. *Do* is not used as an auxiliary verb, so it is likely to be omitted in English.

   Example: What he carry to school?

4. When answering negative questions, speakers of Japanese respond to the correctness of the *person* asking the question, whereas English speakers respond to the correctness of the question itself.

   Example: Question: You're not coming?

   Answer: Yes, I am not coming. (English answer: No, I'm not.)

5. The impersonal *it* is not used in Japanese, so it is likely to be eliminated in English.

   Example: To bake take one hour.
   (English equivalent: It takes one hour to bake.)

6. The Japanese use gerunds and infinitives interchangeably, so they may not be distinguished in English sentences.

   Example: I am helping painting.
   (English equivalent: I am helping to paint.)

Note. Adapted from *Japanese-Influenced English*, by N. Takada and E. Hanahan, 1995 (December), paper presented at the annual meeting of the American Speech-Language-Hearing Association, Orlando, FL.

Fahey, K.R., & Reid, D.K. (2000). Language development, differences, and disorders: A Perspective for general and special education teachers and classroom-based speech-language pathologists. Austin, TX: Pro Ed. Reprinted with permission.

Table 6.7
Characteristics of Chinese that Influence English Usage

1. The plural in Chinese is marked by using a number word, rather than by adding a bound morpheme. Consequently, Chinese are likely to omit the final *-s, -es.*

   Example: two book

2. Tense is marked by a separate word. The past tense in the Mandarin, for example, is marked by adding *le* after the verb at the end of the sentence.

   Example: ta lai le (He come already.)

   Another way to express tense is to use an adverb of time, such as *yesterday* or *tomorrow.* Note that the form of the verb does not change.

   Example: wo min tien chu (I tomorrow go)

   wo zuo tien chu (I yesterday go)

3. Sentences are not transformed in order to form interrogatives. A questions marker *(ma)* is added.

   Example: ta gau ma (Is he tall?)

   Another way to form an interrogative is by coupling positive and negative forms.

   Example: ta gau bu gau? (He tall, not tall. = Is he tall?)

4. Chinese does not mark gender, such as *he, she,* and the neuter form, *it.*

   Example: He and his husband eat.

5. Chinese does not use the verb *to be.*

   Example: hwa hen mei (Flower very beautiful)

6. Chinese does not use the indefinite article.

   Example: I take lesson today.

Note. Adapted from *Chinese-Influenced English,* by L.-R. Cheng, 1995 (December), paper presented at the annual meeting of the American Speech-Language-Hearing Association, Orlando, FL. Adapted with permission.

Fahey, K.R., & Reid, D.K. (2000). Language development, differences, and disorders: A Perspective for general and special education teachers and classroom-based speech-language pathologists. Austin, TX: Pro Ed. Reprinted with permission.

Table 6.9
Characteristics of Vietnamese that Influence English Usage

1. Vietnamese is essentially monosyllabic. Many words do consist of more than one syllable, but they are written as separate syllables, sometimes with and sometimes without hyphens. There are bound (e.g., *un-*) and free (e.g., *tie*) morphemes. Nevertheless, the language is noninflectional. Context and specific markers are used to denote tense, plurals, possessives, and so on.

   Example: Yesterday I go to school.

2. Although Vietnamese uses subject-verb-object word order, speakers put the adjective after the noun.

   Example: desk high

3. Vietnamese speakers eliminate the verb *to be*.

   Examples: He teacher.

   They happy yesterday.

4. Speakers of Vietnamese use the verb *done* to indicate past action.

   Example: I done visit my uncle.

5. There is no *to* in the infinitive form.

   Example: He learn sing?

6. Vietnamese forms the interrogative by placing *no* at the end of the sentence.

   Example: You want play, no? (meaning "Do you want to play?")

Note. Adapted from *Vietnamese-Influenced English*, by D. T. Hoi and N. N. Bich, 1995 (December), paper presented at the annual meeting of the American Speech-Language-Hearing Association, Orlando, FL.

Table 6.10
Characteristics of Native American English Dialects

1. It is common across many, but not all, Native American dialects for speakers to drop final consonants and to reduce final consonant clusters, but the *rules* for doing so vary in complex ways across ancestral groups. The rules also vary from those of other language communities (e.g., African and Hispanic Americans) and are influenced by the particular characteristics of the ancestral tongue.
2. Use of the negation parallels structures used in SAE and in other nonstandard dialects. There is evidence to suggest, however, that the placement of the negative may reflect different rules. Among Isletans, for example, the placement is used to convey a highly precise meaning and is not governed by rules related to language form.

   Examples: The Isleta man does not do anything like that.
   (meaning that Isleta women may)

   The Isleta man does not do nothing like that.
   (meaning that the Isleta man will do something else)

3. Many of the deviations from Standard American English pronunciations are predictable from the phonological characteristics of Native American languages. Consequently, these features do not constitute error patterns.

Note. Adapted from *American Indian English*, by W. L. Leap, 1995 (December), and from *A Preliminary Analysis of English Phonological Trends in Mississippi Choctaw Children*, by P. McCardle and J. H. Walton, 1995 (December), papers presented at the annual meeting of the American Speech-Language-Hearing Association, Orlando, FL.

Fahey, K.R., & Reid, D.K. (2000). Language development, differences, and disorders: A Perspective for general and special education teachers and classroom-based speech-language pathologists. Austin, TX: Pro Ed. Reprinted with permission.

Table 10.1

ARTICULATION AND LANGUAGE DIFFERENCES COMMONLY OBSERVED AMONG ARABIC SPEAKERS (see Buell, 1985; Metz, 1990).

Articulation Characteristics	***Possible English Errors***
n/ng substitution	son/song, nothin'/nothing
sh/ch substitution	mush/much, shoe/chew
w/v substitution or f/v substitution	west/vest, Walerie/Valerie fife/five, abofe/above
t/voiceless "th" substitution or s/voiceless "th" substitution	bat/bath, noting/nothing sing/thing, somesing/something
z/voiced "th" substitution	brozer/brother, zese/these zhoke/joke, fuzh/fudge
retroflex /r/ doesn't exist;	speakers of Arabic will use a tap or trilled /r/
There are no triple consonant clusters in Arabic, so may have epenthesis	kinduhly/kindly, harduhly/hardly
o/a substitutions	hole/hall, bowl/ball
o/oi substitutions	bowl/boil, foble/foible
a/uh substitutions	snuck/snack, ruck/rack
ee/i substitutions	cheep/chip, sheep/ship
Language Characteristics	***Possible English Errors***
Omission of possessives 's and "of"	That Kathy book. The title the story is...
Omission of plurals	She has 5 horse in her stable. He has 3 pen in his pocket.
Omission of prepositions	Put your shoes.
Omission of form "to be"	She ___ my friend.
Inversion of noun constructs	Let's go to the station gas.

Source: Roseberry-McKibbin, Roseberry. Multicultural Students with Special Language Needs. Oceanside, CA: 1995, p.117. Reprinted with Permission.

APPENDIX H

LANGUAGE SCALES AND TESTS FOR EARLY CHILDHOOD AND SCHOOL-AGE STUDENTS

CHERRY CREEK CHILD FIND DAY CARE / PRESCHOOL CHECKLIST

CHILD'S NAME _____ **DATE OF BIRTH** _____

DAY CARE CENTER _____ **CARETAKER** _____

Please fill out this checklist to help plan for this child's needs. Comments on behaviors are very helpful. Please observe the child over a one-week period before filling this out.

AREA OF CONCERN	NOT A CONCERN	OCCASIONALLY	FREQUENTLY	CONSISTENTLY
MOTOR PROBLEMS				
works very slowly on simple tasks				
holds pencil/crayons awkwardly				
hesitancy to participate in gross motor activities on playground				
difficulty with scissors				
poor physical coordination				
SPEECH & LANGUAGE PROBLEMS				
mispronounces words and sounds				
omits parts of sentences				
non-fluent, stutters				
difficulty in reasoning, problem solving				
difficulty in expressing ideas				
trouble following directions				
ability to maintain topic of conversation				
BEHAVIOR				
frequent absences				
overly aggressive				
anxious or fearful in new situations				
lacks self-confidence				
doesn't interact with adults				
doesn't relate to peers in a positive manner				
withdrawn				
short attention span				
demands or requires individual attention				
unable to delay or control impulses				

COMMENTS:

Please give this checklist to your child's preschool teacher to complete and ask him/her to return it to:

CHILD FIND
1855 South Joliet Street
Aurora, CO 80012
PH (303) 338-1486
FAX (303) 743-7947

AREA OF CONCERN				
PERCEPTUAL PROBLEMS	NOT A CONCERN	OCCASIONALLY	FREQUENTLY	CONSISTENTLY
AUDITORY				
difficulty following oral directions				
trouble following directions or understanding a speaker when background noise is present				
poor memory for songs, finger plays				
VISUAL				
rubs eyes often				
difficulty in discriminating differences in color, form, shape and size				
difficulty in directing attention to specific items				
difficulty with puzzles				
PRE-ACADEMIC SKILLS				
doesn't know body parts				
doesn't know basic colors				
can't count objects in a set (1-10)				
can't rote count (1-10)				
doesn't recognize basic shapes				
can't draw simple figures				
PLAY SKILLS				
prefers solitary activity				
plays beside, but not with others				
cooperative play				
limited fantasy play				
needs help keeping busy				

COMMENTS:

Signature of Person Completing Form: _____

Date: _____

Published Scales

Test Name	Age Range	Purpose	Publisher	Cost
Battelle Developmental Inventory Screening Test (BDI), 1988	Birth-8	Assesses cognition, expressive and receptive language, gross and fine motor skills, psychosocial behaviors, and adaptive behaviors.	Riverside Publishing 425 Spring Lake Drive Itasca, IL 60143-2079	Complete kit: $312.50
Bayley Scales of Infant Development, Second Edition, 1993	1-42 months	Assesses mental, motor and behavior development. Covers cognitive, articulation, and gross motor domains.	The Psychological Corporation 555 Academic Court San Antonio, TX 78204-2498	Complete kit: $896.50
Birth to Three Assessment and Intervention, Second Edition (BTAIS-2), 2000	Birth-3	Includes a screening test of developmental abilities, a comprehensive test of developmental abilities, and a manual for teaching developmental abilities.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $229.00
Early Language Milestone Scale, Second Edition (ELM Scale-2), 1993	Birth-36 months	Assesses speech and language development. Can be used with older children who have developmental delays.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $124.00
The Denver II, 1989	Birth-6	Expressive and receptive language, gross and fine motor, psychosocial, self-help, adaptive, and a behavioral rating scale are domains included in the assessment. An articulation screening can be purchased.	Denver Developmental Materials, Inc. P.O. Box 6919 Denver, CO 80206	Complete kit: $53.00

MacArthur Communicative Development Inventories (CDI), 1993	8-30 months	Parental feedback is used to screen for language delay, describe patterns of strengths and weaknesses, form intervention strategies, and evaluate treatment effectiveness.	Singular Publishing Group, Inc. 4284 41st Street San Diego, CA 92105	Complete kit: $188.95
Miller Assessment for Preschoolers, 1982	2:9-5:8	Assesses foundations and coordination in fine and gross motor domains along with receptive and expressive language and cognition.	The Psychological Corporation 555 Academic Court San Antonio, TX 78204-2498	Complete kit: $686.00
Peabody Development Motor Scales (PDMS), 1983	Birth-6:11	Assesses motor skills by testing reflexes, balance, nonlocomotor, locomotor, propulsion, grasping, hand use, eye-hand coordination, and finger dexterity. A new version will be published in 2000.	Riverside Publishing 425 Spring Lake Drive Itasca, IL 60143-2079	Complete kit: $338.00
Preschool Language Scale, Third Edition (PLS-3), 1992	Birth-6:11	Assesses receptive and expressive language skills through two subscales: auditory comprehension and expressive communication.	The Psychological Corporation 555 Academic Court San Antonio, TX 78204-2498	Complete kit: $145.00
Receptive-Expressive Emergent Language Test (REEL-2), 1991	Infants and toddlers up to age 3	Identifies children with specific language behaviors through parent interviews. Results show an expressive, receptive, and combined language age.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $79.00

The Rossetti Infant-Toddler Language Scale, 1990	Birth-3:0	Assesses preverbal and verbal areas of communication interaction including: interaction-attachment, pragmatics, gesture, play, and language comprehension and expression.	LingiuSystems 3100 4th Avenue East Moline, IL 61244	Complete kit: $69.95
Vineland Adaptive Behavior Scales (A revision of Vineland Social Maturity Scales), 1984	Birth-18:11	Interview format used to assess personal and social sufficiency of individuals with disabilities. Domains include receptive and expressive language, gross and fine motor, psychosocial, and adaptive behavior.	American Guidance Service Inc. 4201 Woodland Drive Circle Pines, MN 55014	Complete kit: $115.00

Norm Referenced Tests

Speech

Articulation

Test Name	Age Range	Purpose	Publisher	Cost
Fisher-Logemann Test of Articulation Competence (F-LTOAC), 1971	Preschool-Adult	Describes subject's phonological system through spontaneous responses in which all English phonemes are examined in their syllabic function.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $164.00
Goldman-Fristoe Test of Articulation-Second Edition (GFTA-2), 2000	2:0-21:11	Measures a child's articulation of 39 consonant sounds and blends.	American Guidance Service, Inc. 4201 Woodland Road Circle Pines, MN 55014-1796	Complete kit: $194.00
Photo Articulation Test-Third Edition (PAT-3), 1997	3:0-8:11	Documents the presence of articulation errors in single words and connected speech using full-color pictures.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $144.00

Phonology

Assessment of Phonological Processes-Revised (APP-R), 1986	3:0-12:0	Identifies broad errors (phonological processes) and specifies target patterns for remediation.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $98.00 Does not include objects
Bankson-Bernthal Test of Phonology (BBTOP),1990	3:0-9:0	Assesses the phonology of individuals by assessing both the errors in individual consonants and word position, and also assessing phonological processes. A screening version is available.	Special Press, Inc. 11230 W. Ave. Suite 3205 San Antonio, TX 78213	Complete kit: $144.00

	Khan-Lewis Phonological Analysis (KLPA), 1986	2:0-5:11	Measures phonological processes involved in articulating and discriminating sounds. Helps diagnose and plan remediation for 15 phonological disorders.	American Guidance Service, Inc. 4201 Woodland Road Circle Pines, MN 55014-1796	Complete kit: $89.00
	Test of Phonological Awareness (TOPA), 1994	K-Second-grade	Measures awareness of individual sounds in words. Scores are strongly related to reading growth.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $143.00
Fluency	Stuttering Prediction Instrument for Young Children (SPI), 1981	3-8	Assesses a child's history, reactions, part-word repetitions, prolongations, and frequency of stuttered words to help determine severity and whether or not to proceed with therapy for that child.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $84.00
	Stuttering Severity Instrument for Children and Adults, Third Edition (SSI-3), 1994	2:10-adult	Measures the stuttering severity of children and adults for clinical and research use.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $89.00

Language

Test Name	Age Range	Purpose	Publisher	Cost
Clinical Evaluation of Language Fundamentals-Third Edition (CELF3), 1995	6:0-21:11	For identification, diagnosis, and follow-up evaluation of language skill deficits in school-age children, adolescents, and young adults.	The Psychological Corporation 555 Academic Court San Antonio, TX 78204	Complete kit:: $348.00
Comprehensive Receptive and Expressive Vocabulary Test (CREVT), 1994	4:0-7:11	Measures receptive and expressive vocabulary. Includes two subtests.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $174.00
Expressive One-Word Picture Vocabulary Test (EOWPVT), 2000	2:0-18:11	Tests ability to name objects, actions, and concepts pictured. Gives an indication of the individual's English speaking vocabulary.	Academic Therapy Publications 20 Commercial Boulevard Novata, CA 94949-6191 1-800-422-7249	Complete kit: $129.00
Goldman-Fristoe-Woodcock Test of Auditory Discrimination (G-F-WTAD), 1970	3:0-adult	Test auditory discrimination skills in quiet and noise.	American Guidance Service, Inc. 4201 Woodland Road Circle Pines, MN 55014-1796	Complete kit: $99.95
Kindergarten Language Screening Test, Second Edition (KLST-2), 1998	4:0-6:11	Helps identify children who need further testing to determine if there is a language impairment.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $94.00

Peabody Picture Vocabulary Test, Third Edition (PPVT-3), 1997	2:6-90:11	Measures receptive vocabulary and can also be used as a screening test of verbal ability.	American Guidance Service, Inc. 4201 Woodland Road Circle Pines, MN 55014-1796	Complete kit: $239.95
Receptive One-Word Picture Vocabulary Test (ROWPVT), 2000	2:0-18:11	Assesses receptive vocabulary. It is a companion to EOWPVT and can be used to make comparisons between receptive and expressive vocabulary.	Academic Therapy Publications 20 Commercial Boulevard Novata, CA 94949-6191	Complete kit: $129.00
Test for Auditory Comprehension of Language, Third Edition (TACL-3), 1999	3:0-9:11	Assesses receptive and spoken vocabulary, grammar and syntax. Subtests include vocabulary, grammatical morphemes, and elaborated phrases and sentences.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $234.00
Test of Children's Language (TOCL), 1996	5:0-8:11	Helps identify specific strengths and weaknesses in language and to recognize those at risk for failure in reading and writing.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $139.00
Test of Early Language Development-Third Edition (TELD-3), 1999	2:0-7:11	Shows an overall spoken language score and includes scores for expressive and receptive language subtests.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $249.00

Test of Language Development-Primary-Third Edition (TOLD-P:3), 1997	4:0-8:11	Assesses the understanding and meaningful use of spoken words, grammar, and the ability to say words correctly.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $218.00

Phonological Awareness

Test Name	Age Range	Purpose	Publisher	Cost
Comprehensive Test of Phonological Processing (CTOPP), 1999	5:0-24:11	Assesses phonological awareness and memory, and rapid naming. Used to identify individuals who need further instruction to enhance their phonological skills.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $209.00
Lindamood Auditory Conceptualization Test (LAC), 1971	Any age	Measures ability to discriminate one phoneme from another and segment a spoken word into its phonemic units.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $98.00
Test of Phonological Awareness (TOPA), 1994	K-Second-grade	Measures awareness of individual sounds in words. Scores are strongly related to reading growth.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $143.00

Reading

Test Name	Age Range	Purpose	Publisher	Cost
Gray Oral Reading Tests, Third Edition (GORT-3), 1991	7:0-18:11	Measures rate and accuracy of individual's ability to read a passage.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $157.00
Test of Early Reading Ability, Second Edition (TERA-2), 1989	3:0-9:11	Measures knowledge of contextual meaning, alphabet, and conventions.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $169.00
Test of Reading Comprehension, Third Edition (TORC-3), 1995	7:0-17:11	Focuses on the holistic, cognitive, and linguistic aspects of reading. Includes general reading comprehension and diagnostic supplements.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $154.00
Test of Word Reading Efficiency (TOWRE), 1999	6:0-24:11	Measures word reading accuracy and fluency. Can be used to monitor ability to recognize sight words and to sound out words.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $114.00

Writing

Test Name	Age Range	Purpose	Publisher	Cost
Test of Early Written Language, Second Edition (TEWL-2), 1996	3:0-10:11	Includes assessment of basic and contextual writing. For children 3:0-3:11, it is suitable for research. For older children, can be used for individual assessment.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $154.00
Test of Written Language, Third Edition (TOWL-3), 1996	7:6-17:11	Measures writing competence through spontaneous and contrived formats.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $176.00

Aptitude

Test Name	Age Range	Purpose	Publisher	Cost
Comprehensive Test of Nonverbal Intelligence (CTONI), 1996	6:0-90:11	Measures analogical reasoning, categorical classifications, and sequential reasoning. Estimates the intelligence of those who have difficulty in language or fine motor skills.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $289.00
Detroit Tests of Learning Aptitude, Fourth Edition (DTLA-4), 1998	6:0-17:0	Measures basic abilities and general intelligence. Also shows the effect of language, attention, and motor abilities on test performance.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $309.00
Test of Nonverbal Intelligence, Third Edition (TONI-3), 1997	6:0-89:11	Measures intelligence, aptitude, abstract reasoning, and problem solving without using language.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $209.00
Young Children's Achievement Test (YCAT), 2000	Preschool-First-grade	Helps identify children at risk for failure in school. Subtests include general information, reading, writing, mathematics, and spoken language.	Pro-Ed 8700 Shoal Creek Blvd. Austin, TX 78757-6897	Complete kit: $169.00

APPENDIX I

REFERENCES

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