ARIZONA DEPARTMENT OF EDUCATION

Speech-Language Services in Arizona's Schools: Guidelines for Best Practice

Exceptional Student Services

Arizona Technical Assistance System (AZ-TAS)

Revised April 2023

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Introduction

The development of communication skills is important for all students and can impact school success. The school-based speech-language pathologist (SLP) or speech-language technician (SLT) plays an important role in education and may serve on both special education and general education teams. SLPs/SLTs may serve students -directly or work with educators and families to address communication and language needs.

This guidance document is designed to assist school-based SLPs/SLTs, administrators, teachers, and parents as they explore the role of speech services in the school-based setting and work together to serve students in Arizona.

Further, these guidelines are provided to promote consistency within Arizona public education agencies (PEAs) in determining student eligibility or when considering dismissal for speech-language therapy as special education or as a related service.

These guidelines are not to be used as criteria for speech-language impairment (SLI) eligibility, nor are they to be used to deny any student in Arizona access to a free appropriate public education (FAPE). No individualized education program (IEP) team may use these guidelines as the sole factor in determining whether a student is eligible for special education under the category of speech-language impairment, nor in determining whether speech services are necessary as a related service, nor should a team use these guidelines to determine the length or duration of speech-language therapy provided.

The Department of Education's Arizona Technical Assistance System (AZ-TAS), as well as other ADE guidance documents, should be used in conjunction with these guidelines. Click on the links below to be directed to these and additional documents on the ADE website:

Evaluation Process

Processes and Procedures for Developing Individualized Education Programs

Prior Written Notice

Occupational Therapy and Physical Therapy: Processes and Procedures for Best Practices in Arizona's Schools

Dyslexia Handbook

The Arizona Department of Education, Exceptional Student Services, employs staff to provide assistance in understanding information provided in these and other department resources.

Additional information may be found on the ADE ESS website

Acknowledgements

The Department of Education would like to express its appreciation to the following Speech-Language Pathologists and Special Education Administrators for their work on the first version (2016) of these guidelines:

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Commonly Used Acronyms

AAC	Augmentative and Alternative Communication
ABA	Applied Behavioral Analysis
ADE	Arizona Department of Education
AHCCCS	Arizona Health Care Cost Containment System
ALTCS	Arizona Long Term Care System
APD	(Central) Auditory Processing Disorder
A.R.S.	Arizona Revised Statutes
ArSHA	Arizona Speech-Language-Hearing Association
ASD	Autism Spectrum Disorder
ASHA	American Speech-Language-Hearing Association
AT	Assistive Technology
AZCCRS	Arizona's College and Career Ready Standards
BICS	Basic Interpersonal Communication Skills
CALP	Cognitive Academic Language Proficiency
CC	Certificate of Clinical Competence (granted by ASHA)
CF	Clinical Fellowship (supervised work experience after an applicant completes master's degree requirements; required for CCC)
CLD	Culturally and Linguistically Diverse
C.F.R.	Code of Federal Regulations
dBHL	decibels, measured in hearing level (measure of a sound's loudness)
DD	Division of Developmental Disabilities
DES	Department of Economic Security
DHS	Department of Health Services
DSM	Diagnostic and Statistical Manual
EBP	Evidence-Based Practices
EI	Early Intervention
ELL	English Language Learner
ESS	Exceptional Student Services at the Arizona Department of Education
FAPE	Free Appropriate Public Education
FERPA	Family Educational Rights and Privacy Act
FM	Frequency-Modulated
Hz	Hertz (measure of a sound's frequency)
ICD-10	International Classification of Diseases, 10th revision, Clinical Modification (standardized listing of descriptive terms and identifying codes for reporting diagnoses and medical services performed)
ID	Intellectual Disability (formerly mental retardation)
IDEA	Individuals with Disabilities Education Act
IEP	Individualized Education Program
IFSP	Individualized Family Service Plan (treatment document for children receiving services through EI)
LEP	Limited English Proficiency
LRE	Least Restrictive Environment
L1	First language of a child
L2	Second language of a child MBSS Modified Barium Swallow Study
MTSS	Multi-Tiered System of Supports (formerly known as RtI)
NBPTS	National Board for Professional Teaching Standards
NOMS	National Outcome Measurement System (developed by ASHA)
PEA	Public Education Agency (district or charter school)

PHLOTE	Primary Home Language Other Than English
PLAAFP	Present Levels of Academic Achievement and Functional Performance
RtI	Response to Intervention
SLI	Speech-Language Impairment
SLP	Speech-Language Pathologist
SLPA	Speech-Language Pathology Assistant
SLT	Speech-Language Technician
SRS	Severity Rating Scale
U.S.C.	United States Code

Overview of School-Based Speech-Language Pathology

Role of the School-Based Speech-Language Pathologist/Technician

The focus of the school-based speech-language pathologist/technician is to address the speech, language, and communication disorders that impact a student's access to curriculum. The school based SLP's goal is to remediate, improve, or alleviate student communication and swallowing problems within the educational environment. A school based SLT may not address swallowing problems. To meet these goals, school-based speech-language pathologists and technicians:

a. prevent, correct, improve, or alleviate articulation, fluency, voice, language (SLP/SLT), and swallowing impairments (SLP only);

b. reduce the functional consequences of the communication and swallowing disabilities by promoting the development, improvement, and use of functional communication skills; and

c. provide support in the general educational environment to lessen the handicap (the social consequence of the impairment or disability) by facilitating successful participation, socialization, and learning (ASHA, 1999).

Federal and Arizona Definitions of Students with Disabilities

Arizona Revised Statues §15-761 defines each disability category that may entitle a student to special education services. Definitions for speech/language impairment are cited below. The definitions for all other disabilities (autism; developmental delay; emotional disability; hearing impairment; other health impairment; specific learning disability; mild, moderate, or severe intellectual disability; multiple disabilities; multiple disabilities with severe sensory impairment; orthopedic impairment; preschool severe delay; traumatic brain injury; and visual impairment) can also be found within the Arizona Revised Statues §15-761.

34. "Speech/language impairment":

a. For a preschool child, means performance on a norm-referenced language test that measures at least one and one-half standard deviations below the mean for children of the same chronological age or whose speech, out of context, is unintelligible to a listener who is unfamiliar with the child. Eligibility for a preschool child under this subdivision is appropriate only when a comprehensive developmental assessment and parental input indicate that the preschool child is not eligible for services under another preschool category or under the developmental delay category. If there is a discrepancy between the measures, the evaluation team shall determine eligibility based on a preponderance of the information presented.

b. For a child who has reached the required age for kindergarten, a speech or language impairment means a communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, that adversely affects a child's educational performance (34 CFR §300.8).

A.R.S. §36-1901(23) defines: "Speech-language pathology" as the nonmedical and nonsurgical application of principles, methods and procedures of assessment, testing, evaluation, and prediction related to speech and language and its disorders and related communication impairments for the nonmedical diagnosis, prevention, amelioration or modification of these disorders and conditions.

A.R.S. §36-1901(20) states: "Practice of speech-language pathology" means:

a. Rendering or offering to render to an individual or groups of individuals who have or are suspected of having disorders of communication service in speech-language pathology including prevention, identification, evaluation, consultation, habilitation, rehabilitation, instruction, and research.

b. Screening, identifying, assessing, interpreting, nonmedical diagnosing and rehabilitating disorders of speech and language.

c. Screening, identifying, assessing, interpreting, nonmedical diagnosing and rehabilitating disorders of oral-pharyngeal functions and related disorders.

d. Screening, identifying, assessing, interpreting, nonmedical diagnosing and rehabilitating cognitive and communication disorders.

e. Assessing, selecting, and developing augmentative and alternative communication systems and providing training in the use of these systems and assistive listening devices.

f. Providing aural rehabilitation and related counseling services to hearing impaired persons and their families.

g. Enhancing speech-language proficiency and communication effectiveness.

h. Screening hearing and other factors for speech-language evaluation and initially identifying persons with other communication disorders and making the appropriate referral.

Speech-language services can be the only special education service or may be provided as a related service. The school-based speech-language pathologist/technician may serve as a member of a variety of teams that make decisions regarding evaluation, eligibility, and services. **Even for students whose only suspected/identified disability is SLI, the speech-language pathologist/technician does not make decisions in isolation regarding the needed evaluation components, the student's eligibility for special education and related services, or the goals and objectives of intervention.** Table 1 summarizes the roles and responsibilities of school- based speech and language pathologists/technicians.

Table 1. Roles/Responsibilities of the School-Based Speech-Language Pathologist/Technician

Role	Speech-Language Pathologist and Technician Responsibilities
Prevention	Provides pre-referral consultations and is involved in various initiatives including MTSS
Identification	Conducts speech-language and hearing screenings Identifies if students failing screening should be referred for evaluation
Evaluation: Determining Need for Evaluation	May serve as member of team for any students with suspected speech-language deficits
Evaluation: Assessment	Conducts a comprehensive assessment to determine the existence of a disability
Evaluation: Interpretation of Assessment	Identifies child's communication strengths and weaknesses Prepares evaluation report
Evaluation: Other	(SLP only) Evaluates psychometric properties of standardized assessments
Eligibility Decision	Presents speech-language assessment results at team meeting Describes the student's functional speech and language skills as they relate to the student's ability to access the curriculum and progress

Role	Speech-Language Pathologist and Technician Responsibilities
Individualized Education Program Development	Drafts parts of present level of performance, IEP goals, and objectives/benchmarks related to speech-language impairment
Intervention	Provides intervention appropriate to the age and learning needs of the individual student
Caseload Management	Employs a continuum of service delivery models in the LRE Meets federal and state mandates, as well as local policies in performance of job duties
Data Collection and Analysis	Gathers and interprets data for individual students, as well as evaluates overall program
Supervision and Mentorship	(SLP only) Supervises university practicum students, clinical fellows, and speech-language pathology assistants. Mentors new SLPs
Documentation	Completes progress reports. (SLP only) Completes performance appraisals for supervisee(s) (SLP only) Maintains all documentation related to Medicaid School-Based Claiming
Collaboration	Works with individuals and agencies in the community, universities, other school professionals, families, and students
Unique Contributions	Contributes to the literacy achievement of students. Addresses the linguistic and metalinguistic foundations of the curriculum
Professional Development	Remains current in all aspects of the profession and supports the use of evidence-based practices (EBP) Stays abreast of educational issues May provide training to other staff members on topics related to speech-language impairments and treatment

Adapted from the American Speech-Language-Hearing Association (2010)

Speech-language pathologists/technicians may also provide support when students are not eligible for speech-language services by serving on various prevention/early intervention team activities (e.g., teacher assistance teams and child study teams). On these teams, the SLP/SLT may conduct observations, complete non-diagnostic assessments, plan with teachers, model interventions, coach teachers, and/or gather data, all in the context of general education.

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Speech-language pathologists may provide prevention and intervention services based on local programs and policies.

> *In the early years of school practice, provision of services focused on fluency, voice, and articulation disorders, with later inclusion of language disorders. Although these areas continue to be included within the SLP's roles and responsibilities, changing legal mandates and an expanded scope of practice for SLPs across settings has prompted a redefinition of work in the schools. Several professional practices may now be included as part of the SLP's workload. These areas include work with students who are medically fragile; work with those with dysphagia;*

work with reading, writing, and curriculum; EBP; RTI; and telepractice (ASHA, 2010, page 10).

The field of speech-language pathology is dynamic. Research in the field provides new information on assessment and intervention approaches. Fully qualified speech-language pathologists possess the foundational knowledge and skills to provide service for all clients. To develop specialized skills, speech-language pathologists must be willing to participate in continuing education to maintain best practice in aspects of the field such as assistive technology, dysphagia (difficulty swallowing), and auditory-oral/auditory-verbal skill development for children with cochlear implants.

Arizona Technical Assistance System (AZ-TAS) documents were developed to assist school personnel and parents in the navigating through the special education process. Each document provides guidance on implementation of the legal requirements in the specified area and is reflective of current practices in the field.

Speech-Language Pathologists/Speech-Language Technicians

All students who have IEPs that specify the provision of speech-language services must receive those services from a qualified speech-language pathologist or speech-language technician. Both speech-language pathologists and speech-language technicians in the schools must hold a valid certificate issued by the Arizona Department of Education. For a speech-language pathologist, the certificate is based on a master's degree in speech-language pathology, with clinical experience (tracking the requirements for the Certificate of Clinical Competence in Speech-Language Pathology offered by the American Speech-Language-Hearing Association and consistent with those of the Board of Audiology and Speech-Language Pathology).

For the speech-language technician, the certificate is based on a bachelor's degree in speech and hearing science, 50 hours of clinical observation in a university setting, and 150 clock hours of supervised speech therapy. As of June of 2013, there is a moratorium on issuing new SLT certificates. Current certificate holders may renew in perpetuity so long as they continue to meet the requirements for renewal and do not let their certification lapse. Both the SLP and SLT certificates are valid for a period of six years. For general information about teaching and professional non-teaching certification in Arizona, visit ADE's Educator Certification webpage. Applications for initial SLP/SLT certificates may be downloaded and your Arizona certificates can be viewed and renewed online.

Both speech-language pathologists and speech-language technicians must hold a license from the Arizona Department of Health Services (DHS) and a certificate from the Arizona Department of Education (ADE). DHS issues a regular (R) license to SLPs, and a limited (L) license to SLTs. An SLP may work in any clinical setting including schools, hospitals, or private practice; an SLT's practice is strictly limited to the school setting. To avoid confusion, those holding a limited license should sign special education documents using the title "Speech-Language Technician" rather than the initials SLP-L alone. Provider application forms for Speech and Hearing Professionals are available on the Arizona Department of Health Services website.

Members of the public may look up SLPs, SLTs, and SLPAs on AzDHS's AZ Care Check to verify that an individual provider holds a current license. To verify that an individual SLP/SLT holds a current certificate from the Arizona Department of Education, members of the public may look them up on the Online Arizona Certification Information System (OACIS). SLPAs do not hold a certificate from ADE). Some PEAs contract with private agencies to provide speech-language services. Arizona statute requires that a provider employed by such an agency (i.e., not employed directly by a PEA, but who provides speech-language services in the schools) is also required to hold both a license from DHS and a certificate from ADE.

IDEA requires that personnel providing services to students with disabilities be qualified and hold the necessary credentials required by the state education agency. In addition, IDEA specifies that qualified professionals conduct assessments.

DHS-licensed speech-language pathologists may provide supervision for speech-language pathology assistants. One full-time SLP may supervise up to two full-time, or three part-time SLPAs.

Regulations regarding the supervision of SLPAs may be found in the Arizona Revised Statutes (see A.R.S. §36-1940.04 (E), (F), and (G)).

Table 2 compares the credentials and roles of personnel providing speech-language services in Arizona schools.

Table 2. Credentials and Roles of Personnel Providing Speech-Language Therapy Services in Arizona Schools

	Speech-Language Pathologist	Speech-Language Technician	Speech-Language Pathologist Assistant	Clerical Support Personnel
Minimum Education Required	Master's degree in Speech-Language Pathology, Speech-Hearing Sciences, or Communication Sciences and Disorders	Bachelor's degree in Speech- Language Pathology, Speech-Hearing Sciences, or Communication Disorders	60 credit hours of college coursework, with a minimum of 20 credits in speech-language pathology technical coursework	High school diploma (There may be additional requirements in Title II schools.)
Certification	Speech-Language Pathologist (SLP) certificate issued by the Arizona Department of Education is required	Speech-Language Technician (SLT) certificate issued by the Arizona Department of Education is required	Is not eligible for certification by the Arizona Department of Education	Not eligible for certification
Licensure	SLP-regular license (or temporary license for Clinical Fellow) issued by the Arizona Department of Health Services is required	SLP-limited license issued by the Arizona Department of Health Services is required and will only be issued to applicants who hold the SLT certificate issued by the Department of Education and have a current contract with a PEA	SLPA license issued by the Arizona Department of Health Services is required	Not eligible for licensure
State Examination	**State exam is waived in lieu of national examination**	Has passed the speech and language Impaired special education portion of the Arizona Educator Proficiency Assessment (AEPA)	Not applicable	Not applicable
National Examination	Has passed the national examination adopted by the American Speech-Language-Hearing Association (ASHA) for purposes of certification in speech-language pathology	No national exam	C-SLPA is OPTIONAL for individuals who pass the ASHA national examination	Not applicable

	Speech-Language Pathologist	Speech-Language Technician	Speech-Language Pathologist Assistant	Clerical Support Personnel
Required Coursework	Course work and demonstration of specific knowledge in the following areas: articulation; fluency; voice and resonance; receptive and expressive language (phonology, morphology, syntax, semantics, and pragmatics) in speaking, listening, reading, writing, and manual modalities; hearing, including the impact on speech and language; swallowing (oral, pharyngeal, esophageal, and related functions, including oral function for feeding; orofacial myofunction); cognitive aspects of communication (attention, memory, sequencing, problem-solving, executive functioning); social aspects of communication (including challenging behavior, ineffective social skills, lack of communication opportunities); communication modalities (including oral, manual, augmentative, and alternative communication techniques and assistive technologies)	Coursework varies by university, but typically includes overview of normal development of speech and language and often does not include courses related to specific communication impairments, their evaluation, or treatment	A minimum of 60 credit hours of college coursework, with the following curriculum content: 20 to 40 semester credit hours of general education or a bachelor's degree, 20 to 40 semester credit hours of speech-language pathology technical coursework, and a minimum of 100 hours of clinical interaction that does not include observation	Not applicable
Clinical Fellowship	Completed under the supervision of a CCC-SLP with a minimum of 9 months full-time experience and 2 hours of supervision training	Not applicable	Not applicable	Not applicable

	Speech-Language Pathologist	Speech-Language Technician	Speech-Language Pathologist Assistant	Clerical Support Personnel
Scope of Practice	Screen, evaluate, and treat individuals with speech-language impairments across the lifespan in all settings including schools, home-based, early intervention, and medical settings	Screen, evaluate, and treat students with speech-language impairments in a school setting (practice is strictly limited to schools)	Under the supervision of an SLP, treats individuals with speech-language impairments across the lifespan in all settings including schools, home- based, early intervention, and medical settings	Not applicable
Clinical Supervision	Clinically autonomous and independent; supervised by building or school administrator and/or special education director; may supervise 2 full-time or 3 part-time SLPAs. Must provide 100% direct supervision of SLPAs when working with medically fragile population. Documentation by SLP of direct contact with AT LEAST 10% of caseload served each quarter. Contact with students, clients, patients on caseload MUST VARY each quarter.	Clinically autonomous and independent, supervised by building or school administrator and/or special education director; may not supervise SLPAs	Supervised by an SLP with at least 2 years of clinical experience. First 90 days licensed in AZ: 20% direct, 10% indirect. First 30 days new employer: 10% direct, 10% indirect. After above: minimum 1 hour of direct supervision weekly (includes telesupervision) plus as much indirect as needed.	Is supervised by SLP or SLT in the performance of nonclinical functions (creating therapy materials, filing, setting appointments, making copies, etc.)
Role in Screening	Conducts and interprets speech and language screenings	Conducts and interprets speech and language screenings	Conducts speech and language screenings without interpretation, using screening protocols specified by the supervising speech-language pathologist	May schedule screenings and prepare screening materials

	Speech-Language Pathologist	Speech-Language Technician	Speech-Language Pathologist Assistant	Clerical Support Personnel
Role in Assessment	Conducts and interprets speech and language assessments and evaluates psychometric properties	Conducts and interprets speech and language assessments	May not administer standardized or non-standardized diagnostic tests or formal or informal evaluations or interpret test results. If qualified, may act as a second-language interpreter during assessments.	May schedule assessments and prepare materials for assessments and may act as a translator. If qualified, may act as a second-language interpreter
Reimbursement for Services	Schools may bill Medicaid for reimbursement of qualified services provided to qualified students	Schools may not bill Medicaid for reimbursement of services	Schools may bill Medicaid for reimbursement of qualified services, provided under the supervision of a licensed SLP to qualified students	Not applicable

Speech-Language Pathology Assistants (SLPAs)

Some PEAs use speech-language pathology assistants (SLPAs) to support the speech-language pathologist. By Arizona statute, SLPAs must be supervised by speech-language pathologists and may not be supervised by speech language technicians. In Arizona, the Department of Education does not issue certificates for SLPAs; they are governed solely by Arizona's Department of Health Services. SLPAs must hold a current SLPA license and be supervised appropriately by an SLP to provide services in the school setting.

The Arizona Revised Statutes defines a speech-language pathology assistant as "a person who provides services prescribed in section 36-1940.04 and under the direction and supervision of a speech-language pathologist licensed pursuant to this chapter (A.R.S. §36-1901(24)).

The Arizona Revised Statutes (§36-1940.04) state that a speech-language pathology assistant's scope of practice is defined as follows:

C. A speech-language pathology assistant may do the following under the supervision of the licensed speech-language pathologist:
    1. Conduct speech and language screenings without interpretation, using screening protocols specified by the supervising speech-language pathologist.
    2. Provide direct treatment assistance, including feeding for nutritional purposes to patients, clients or students except for patients, clients, or students with dysphagia, identified by the supervising speech-language pathologist by following written treatment plans, individualized education programs, individual support plans or protocols developed by the supervising speech-language pathologist.
    3. Document patient, client, or student progress toward meeting established objectives as stated in the treatment plan, individual support plan or individualized education program without interpretation of the findings and report this information to the supervising speech-language pathologist.
    4. Assist the speech-language pathologist in the collecting and tallying of data for assessment purposes, without interpretation of the data.
    5. Act as a second-language interpreter during assessments.
    6. Assist with informal documentation during an intervention session by collecting and tallying data as directed by the speech-language pathologist, preparing materials, and assisting with other clerical duties as specified by the supervising speech-language pathologist.
    7. Schedule activities and prepare charts, records, graphs, or other displays of data.
    8. Perform checks and maintenance of equipment.
    9. Participate with the speech-language pathologist in research projects, in-service training, and public relations programs.
    10. Sign and initial treatment notes for review and co-signature by the supervising speech- language pathologist.

D. A speech-language pathology assistant shall not:
    1. Conduct swallowing screening; assessment and intervention protocols, including modified barium swallow studies.

2. Administer standardized or non-standardized diagnostic tests, formal or informal evaluations or interpret test results.
3. Participate in parent conferences, case conferences or any interdisciplinary team meeting without the presence of the supervising speech-language pathologist, except for individualized education program or individual support plan meetings if the licensed speech pathologist has been excused by the individualized education program team or the individual support plan team.
4. Write, develop, or modify a patient's, client's or student's treatment plan, individual support plan or individualized education program in any way.
5. Provide intervention for patients, clients, or students without following the treatment plan, individual support plan or individualized education program prepared by the supervising speech-language pathologist.
6. Sign any formal documents, including treatment plans, individual support plans, individualized education programs, reimbursement forms or reports.
7. Select patients, clients, or students for services.
8. Discharge patients, clients, or students from services.
9. Unless required by law, disclose clinical or confidential information orally or in writing to anyone not designated by the speech-language pathologist.
10. Make a referral for any additional service.
11. Communicate with the patient, client, or student or with family or others regarding any aspect of the patient, client, or student status without the specific consent of the supervising speech-language pathologist.
12. Claim to be a speech-language pathologist.
13. Write a formal screening, diagnostic, progress, or discharge note.
14. Perform any task without the express knowledge and approval of the supervising speech-language pathologist.

A speech-language pathology assistant may not be used to provide services to students on an SLP's caseload in the absence of a qualified speech-language pathologist. PEAs may consider the addition of a speech-language assistant to facilitate the completion of nonclinical duties, provide services under the direction of an SLP, and serve as a recruitment or retention tool.

Substitutes and Vacancies

The U.S. Department of Education's Office of Special Education Programs (OSEP) has addressed the impact of an interruption of services on a student's right to a free and appropriate public education (FAPE). The Department encourages "public agencies to consider the impact of a provider's absence or a child's absence on the child's progress and performance and to determine how to ensure the continued provision of FAPE for the child to continue to progress and meet the annual goals of his or her IEP. Whether an interruption of services constitutes a denial of FAPE is an individual determination that must be made on a case-by-case basis" (OSEP letter to ASHA, March 2007).

Given these requirements, PEAs face significant challenges when they have vacant positions or temporary absences. Every effort should be made to secure a qualified speech-language pathologist/speech-language technician by maintaining an open job announcement for a qualified speech-language pathologist/speech-language technician and engaging in ongoing

recruitment efforts. The PEA may wish to contract with a private agency to provide services, assuring that the agency's personnel hold appropriate licensure and certification. It is the responsibility of the PEA, not of the agency providing purchased services, to verify that all service providers hold the appropriate and current license, certificate, and an identity verified prints (IVP) fingerprint clearance card. In addition, PEAs should recruit a pool of qualified speech-language pathology substitutes to cover caseloads during short- or long-term absences. (Retired speech-language pathologists who have retained their credentials may be a valuable pool for substitutes or part-time personnel.)

For short-term absences, speech-language pathologists should take advantage of the flexibility written into IEPs for scheduling services to enable them to reschedule students at other times. However, when rescheduling, the PEA must ensure that students do not receive services that are less than those specified on the IEPs.

For long-term interruption of services, whether it is due to a vacancy or medical leave, the PEA must inform the parents of students who are not served or underserved of the interruption of services. The parents must be assured that once the services resume, the IEP team will determine if the student is entitled to compensatory services and must issue a prior written notice (PWN) documenting that determination.

Supervision and Mentoring

Supervision

Speech-language pathologists/technicians may be supervised by a variety of persons within a PEA, including but not limited to principals, special education directors, speech-language pathology coordinators, or lead speech-language pathologists. Therefore, the supervisor may not be aware of the various roles and responsibilities that the school based SLP is required, by federal, state, or local mandates, to perform.

The speech-language pathologist/technician has the responsibility to provide his or her supervisor with sufficient information about the roles and responsibilities of SLPs/SLTs to enable the supervisor to provide effective supervision. The supervisor can provide effective evaluation of the SLP's/SLT's teamwork, cooperation, professionalism, and ability to be able to complete required special education procedures in a timely fashion. The supervisor may not be able to provide evaluative feedback regarding specific clinical interventions. In such cases, it may be helpful to incorporate self-reflection exercises into the performance review process. For additional resources, see ASHA's Professional Performance Review Process for the School- Based Speech-Language Pathologist.

Speech-language pathologists may also find themselves in supervisory roles for fellow speech-language pathologists, clinical fellows seeking to complete the clinical fellowship requirements for ASHA's Certificate of Clinical Competence, for speech-language pathology assistants, and for SLP/SLPA practicum students. Supervision of graduate students and Clinical Fellows must be provided by an SLP who holds ASHA certification, has completed a minimum of 9 months of full-time clinical experience post-certification by ASHA, and has completed a minimum of 2 hours of professional development in clinical instruction and/or supervision.

Mentoring

Mentoring is a cooperative arrangement between peers in which an experienced staff members provide newly hired personnel with ongoing support and assistance. The relationships should be collegial in nature and all experiences should be directed toward the development and refinement of the knowledge and skills necessary for effective learning. The goal of mentoring is to develop knowledge of the values, beliefs, and practices that lead to a more productive, efficient,

and effective professional. It contributes to successful retention, career satisfaction, better decision-making, and greater perceived confidence (Horgan and Simeon, 1991). Although most mentoring resources are intended to support new teachers, many of the mentoring objectives for teachers are also applicable to new school-based speech- language pathologists/technicians. Objectives include facilitating a seamless transition to the first year of employment in the schools, preventing isolation, and improving skills.

The Practice-Based Standards for the Preparation of Special Education Teachers, published by the Council for Exceptional Children, offer suggestions for the roles and responsibilities of beginning and mentor teachers in special education (2008). Both individuals should have an active role. Responsibilities for each role are shown below

Responsibilities of Mentors and Newly Hired SLPs/SLTs

Newly Hired SLP/SLT

Requesting assistance proactively related to service delivery, school and community culture, working with other school personnel, and other personal or professional issues, Attending all training sessions and sessions with the mentor speech-language pathologist, Remaining open and responsive to feedback, Observing other experienced personnel, including the mentor speech-language pathologist, conducting self-assessments and using reflective skills to enhance clinical skills, and Participating in the evaluation of the mentoring program.

Mentor SLP/SLT

Providing support and guidance to the newly hired speech-language pathologist in the areas of planning, assessment, working with parents and colleagues, obtaining materials and equipment, cultural sensitivity, school procedures, district policies, and local special education procedures, Acclimating the newly hired speech-language pathologist to the culture of the school and community, Observing the newly hired speech-language pathologist as appropriate and providing feedback, Attending all training sessions relevant to mentoring, Maintaining a professional and confidential relationship based on respect and trust, and Participating in the evaluation of the mentoring program.

Recruiting and Retaining Qualified Speech-Language Pathologists and Speech-Language Technicians

Recruiting and retaining qualified SLPs and SLTs is a challenge statewide. School-based speech-language pathology programs are affected by staff shortages, increased paperwork, funding cuts, greater workload/caseload demands, higher salaries in other clinical settings, and changing delivery models and standards. A variety of creative approaches to enhance work conditions or employment opportunities can be used to recruit and retain qualified staff. Speech-language pathologists and technicians are encouraged to work with school leaders to determine strategies that may assist in recruiting and retention efforts.

Some examples of **adjustments to working conditions** include reducing or capping caseloads, using a workload model, and paying licensure fees and/or membership dues in professional organizations such as the American Speech-Language-Hearing Association (ASHA) and the Arizona Speech-Language-Hearing Association (ArSHA). Additionally, school based SLPs report that PEAs sometimes provide salary addendums, caseload caps, funding for continuing education, mobile devices or other technology, a budget for purchasing diagnostic/therapy materials, clerical support, or an SLPA as recruitment or retention incentives.

Some examples of **alternative, creative job structures** that may attract SLPs/SLTs/SLPAs include creating part-time positions with benefits, allowing hybrid work schedules, teletherapy, virtual meetings, and job-sharing. Financial incentives include establishing a separate pay scale, providing salary stipends, and recognizing ASHA's Certificate of Clinical Competence (CCC) as a

national certification equivalent to the National Board for Professional Teaching Standards (NBPTS) and compensating SLPs accordingly.

A number of PEAs have determined that the CCC is equally rigorous and comparable to the NBPTS requirements and made SLPs eligible for any associated stipends. The NBPTS does not offer certification to speech-language pathologists, so the ASHA standard was used as a proxy in those divisions (ASHA Leader, June 10, 2003). Extending contracts to eleven months for certain staff to cover summer evaluations and services and administrative responsibilities is another option PEAs may consider when addressing recruitment issues. Providing an option for telecommuting for completing nonclinical duties may provide flexibility that is appealing to SLPs/SLTs.

Reported shortages of school-based speech-language pathologists and technicians are an ongoing concern for many PEAs. Speech-language pathologists have a variety of employment options within their scope of practice. Therefore, it is in the PEA's best interest to remain competitive. Because speech-language pathologists are also employed in medical settings, recruiting efforts should focus on more than traditional teacher recruitment strategies, and can be ongoing throughout the year. The checklist below provides additional strategies and recruitment opportunities that may be used by PEAs.

SLP/SLT Recruitment and Retention Strategies

☐ Participate in local, regional, state, and national job fairs (e.g., ArSHA and ASHA, ADE Teach-In),

☐ Post job opportunities on professional websites (e.g., ASHA, ArSHA, and ADE's free Arizona Education Employment Board

☐ Obtain mailing lists of local SLPs from professional associations (e.g., ArSHA, ASHA) or state agencies (e.g., the Department of Health Services). Contact state and regional colleges and universities with programs in speech-language pathology to recruit SLP/SLPA students

☐ Serve as a site for student practicum or internships with state or regional universities

☐ Create part-time positions for retirees or SLPs who have left the workforce

☐ Provide clerical or clinical support

☐ Consider caseload caps, workload formulas, alternative service delivery models (e.g., 3:1 model)

☐ Provide financial incentives, such as a separate pay scale, salary addendums, stipend for national certification, 11-month contracts, or paying for professional development or licensure/certification fees

☐ Provide a speech room with adequate space and storage

☐ Provide a budget for purchase of assessment/therapy materials

Evidence-Based Practice

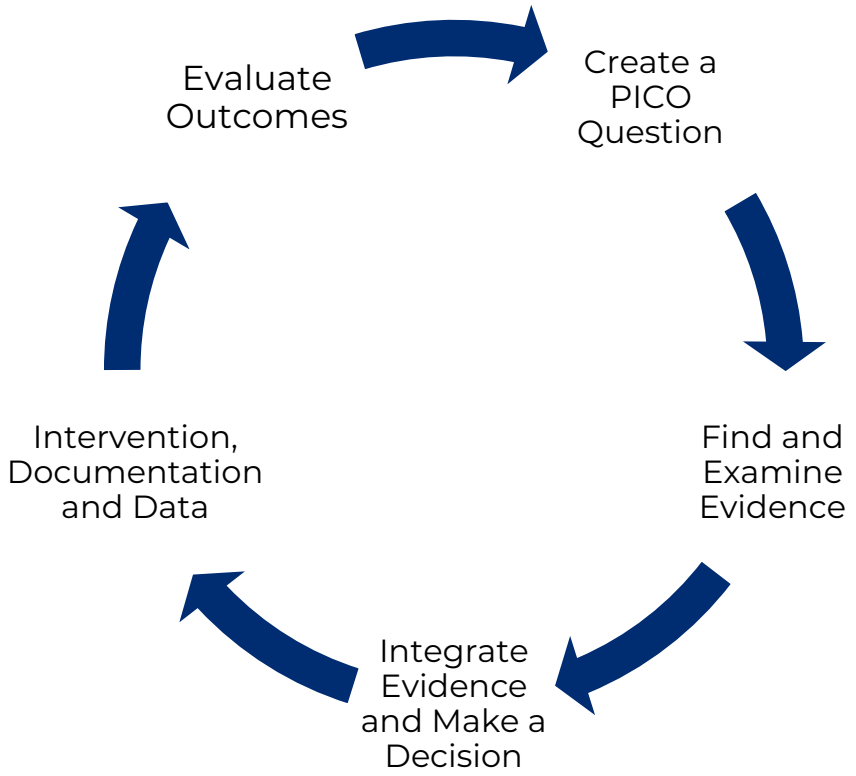
The use of scientifically based research and evidence-based practice (EBP) is indicated by the Every Student Succeeds Act (ESSA) and state and local policies and procedures. EBP is a term that describes a model for professional work and a way of working that increases accountability and student outcomes. This section includes:

- an overview of evidence-based practice,
- information on documentation and data collection, and
- evaluation of outcomes.

Overview of Evidence-Based Practice

Speech-language pathologists (SLPs) who serve students in Arizona public schools should employ service delivery models and treatment approaches that are proven to be beneficial on the basis of the highest level of scientific research evidence available. Evidence-based practice includes a sequence of steps as shown in Figure 1 below. A tutorial detailing specific steps in making evidence-based practice (EBP) clinical decisions when serving children was recently published in the American Journal of Speech-Language Pathology (Johnson, 2006). In addition, several articles in peer-reviewed journals have addressed issues that are particularly relevant to the application of EBP in public school systems (e.g., Justice & Fey, 2004; Meline & Paradise, 2003). SLPs should understand the steps for gathering and reviewing external evidence and the issues to consider when using evidence to make decisions regarding treatment in schools. SLPs are encouraged to use research and be aware of factors that impact school based EBP services for students. Another resource is ASHA's disability/disorder specific Evidence Maps.

Figure 1 . Overview of Evidence-Based Practice



Create a PICO Question

Evidence-based practice begins with clarifying the specific issue that must be addressed or the decision that must be made. The clarification of an issue forms a PICO question. Thoughtful development of this clear and specific question allows the gathering of relevant research findings and lays the foundation for the EBP decision-making process. A well-formed PICO question has four components that are stated in terms that are as specific as possible: the patient or population (P), the intervention (I), the comparison (C), and the desired outcome (O). The more specific each component of the PICO question, the more relevant will be the evidence that results from the search of the published literature. Searches based on generic questions often result in too little relevant information. An example of a well-formed PICO question might be, "Do preschool children with expressive language deficits (P) demonstrate improved word decoding skills (O) following one-on-one literacy intervention using print-referencing strategies (I) in comparison to classroom-based instruction (C)?"

Find and Examine the Evidence

After the PICO question has been defined, a search of the published research literature should be conducted by accessing electronic professional databases, such as the American Psychological Association's PsycINFO, the Education Resources Information Center's (ERIC) public database, or PubMed's Medline and entering keywords to identify potentially relevant research publications. Additionally, ASHA members have access to an online search engine that will identify and deliver full-text versions of articles published in all ASHA journals. Publications that appear to address the PICO question must be obtained and reviewed to complete the next step: evaluating the evidence.

Several resources are available to guide practitioners through the important step of evaluating the level of evidence, validity, and importance of the published research data that address the PICO question. Speech-language pathologists should be familiar with basic EBP search procedures. In addition, SLPs must be able to search the professional literature regarding an array of disorders, as well as evidence specific to the practice of speech-language pathology.

Once the relevant research is identified, readers should be able to review the work with attention to the study design, measurement methods used, and possible biases. Resources include publications from the medical profession that explain EBP in depth, such as the book Evidence-Based Medicine: How to Practice and Teach EBM (Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000), online portals such as the Cochrane Collaboration, and resources specific to speech-language pathology such as the ASHA technical report on EBP (American Speech-Language-Hearing Association, 2004).

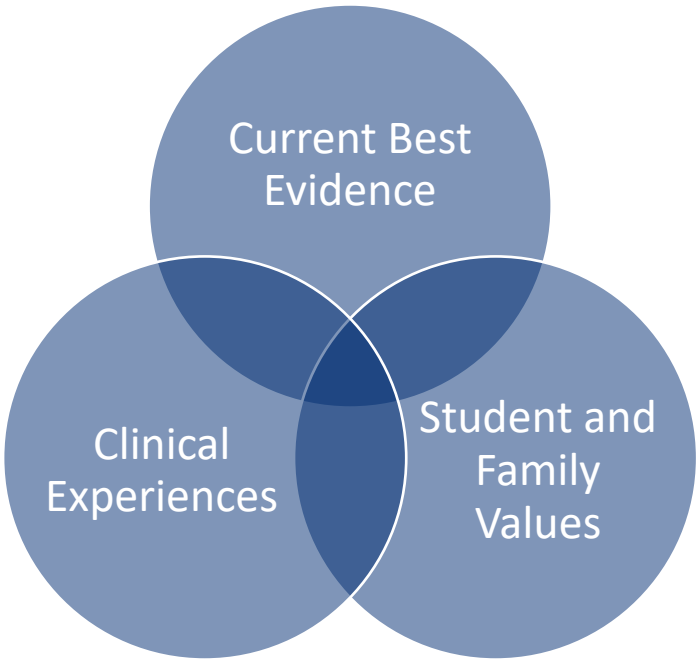
An additional source of information that may be of particular help to busy practitioners is published meta-analyses and systematic reviews that address clinical issues in speech-language pathology (e.g., Cirrin & Gillam, 2008; Law, Garrett, & Nye, 2004; McCauley, Strand, Lof, Schooling, & Frymark, 2009). A Compendium of EBP Guidelines and Systematic Reviews is available from the ASHA website.

Integrate Evidence and Make Decisions

In their recent description regarding the use of EBP to make clinical decisions about language intervention for children in schools Gillam and Gillam (2006) summarized critical questions to consider when comparing research studies. Of particular interest for school SLPs may be the assertion that in addition to assessing the published research (external) evidence, school practitioners should also consider the relevant internal evidence (student-parent and clinician-agency factors) that contribute to school-based clinical decisions. Student-parent factors are described as the cultural values, interests, engagement, activities, and opinions of the family.

Agency and clinician factors include training, theoretical orientation, agency policies and resources, as well as intervention data. Figure 2 illustrates the balance of factors that should be considered when making evidence-based treatment decisions.

Figure 2. Factors to Consider When Integrating Evidence and Making Decisions



Intervention Documentation and Data

After the evidence has been evaluated and the intervention has been selected and implemented, it is necessary to document the intervention and gather data. This data will be used to document student progress and is vital for the next step of evaluating outcomes. Data must be gathered throughout the process to determine whether the intervention is effective.

Evaluate Outcomes

Professionals cannot claim that they use EBP if they do not evaluate intervention outcomes. During this critical phase, the SLP reviews documentation and data collected to determine if the student is making progress. At a minimum, SLPs should use data and documentation of efforts to evaluate outcomes during naturally occurring points in the educational cycle, such as the annual IEP and progress reporting periods.

Additional information about the process for evaluating treatment outcomes is available through other published resources such as the article “Making Evidence-Based Decisions about Child Language Intervention in Schools” (Gillam and Gillam, 2006).

Documentation and Data Analysis

An essential part of the job for every SLP/SLT is maintaining appropriate documentation and data collection systems. Documentation includes recording dates services were provided and what goals were addressed. If scheduled services were not provided, the reason for missed services should be documented and compensatory service offered if it is appropriate.

Documentation provides a record of IEP service implementation and information for progress reports and parent/teacher conferences. Data include information about student performance

that is recorded and can be used to guide instruction, communicate with parents, develop an IEP, or demonstrate progress. Specific uses of data include:

- informing the evidence-based decision-making cycle
- identifying current skill levels or present levels of performance
- evaluating outcomes and determine mastery of goals.
- documenting progress and develop future goals.
- collecting baseline data and measure progress over time
- providing a record for the IEP team and educators

Data should be collected and reviewed regularly. IDEA (2004) requires a student's individualized education program (IEP) include a statement regarding how the child's progress toward all annual goals will be measured. There are many kinds of data that can be collected in the school environment. Data should include both qualitative and quantitative measures.

Quantitative data collection measures behaviors that are observed and counted. It is typically considered to be objective data, meaning that the behavior can be defined well enough that different people could observe and count the occurrences of the same behavior. Quantitative data include measures of correct or incorrect (e.g., production of initial /k/ in words), present or not present (e.g., the use of -ing verb form) and appropriate or inappropriate (e.g., means of gaining attention). Most data taken will measure the frequency of a behavior, but it could also monitor duration or rate.

Qualitative data involve describing and reflecting on what has been observed. It is considered subjective data because it depends upon the perspective of the person doing the observing. Qualitative data acknowledge that communication does not occur in a vacuum, making the environment and perspectives of communication partners important in measuring the success or failure of treatment. Qualitative data include descriptive observations and interviews with parents, teachers, or students (Olswang & Bain, 1994). Educators should use a data collection system that is consistent, considers the type of data being collected, and accurately measures progress.

Intervention Documentation and Data

Effective data collection requires more than simply recording student responses and behavior. The reason for the data collection, the type of data to be collected, by whom, and how often it will be recorded should be considered. Different types of data may be collected to:

- demonstrate a student's ability to perform a task or skill
- assess the level of support that is needed
- measure progress over time

Examples of data types are listed in Table 5. Data collection forms designed to match the type of data being collected can make the collection, summary, and analysis easier. For example, the data form used to record the number of times a student initiates communication would be different from the data form used to gather information on what happens immediately before and after a behavior (i.e., frequency count table to tally occurrences vs. antecedent, behavior, consequence [ABC] log). Appendix E contains sample data collection forms. Data must provide accurate information regarding a student's performance. To have accurate information, the recording of data must be consistent. If, for example, only 30 out of 50 responses are recorded, with a student randomly missing 20, those 20 missed responses could significantly change the percentage of correct/incorrect responses and views of student performance.

Table 5. Types of Data Commonly Collected in Education Settings

Data Type	Description	Example
Cue Recording	Data note visual, verbal, or physical cues given prior to a student response.	Recording which student responses were preceded by a visual cue for sound placement.
Duration Recording	Data record the length of time a student is engaged in a specific, discrete behavior. Any recorded behavior should have a clear beginning and ending so that stop and start times are consistent.	Recording the length of time a student demonstrates joint attention during a structured task.
Frequency Counts	Data are collected on the frequency of a skill or occurrence of a behavior.	Recording the number of times a student correctly produces a target sound or uses pronouns correctly when telling a story.
Language/ Narrative Samples	Written record of student's expressive output.	A list of all utterances a student says when telling a story based on a wordless picture book.
Latency Recording	Data measure the amount of time between instruction or a prompt and the initiation of a student's behavior.	Recording the amount of time between the delivery of a carrier phrase and the student's response.
Pre-test/Post-test	This method involves testing a student on specific material before an intervention, and giving a test on the same material after a chosen intervention has been implemented. Note: Refers to non-standardized informal tests such as SLP-/SLT-created criterion-referenced tests.	Scoring a student's narrative of a wordless picture book before and after intervention.
Rating Scales/Rubrics	Rating scales and rubrics can be used to quantify descriptions.	The classroom teacher describes a student's overall use of a target sound on a 5-point rating scale.
Observations	Notes may detail descriptions of events or a student's performance in a class. These data can be combined with other data, such as frequency counts or duration recordings.	Observer provides a description of classroom events surrounding a communication breakdown.
Work Products	Collection includes any student-completed work that reflects targeted skills (e.g., tests, quizzes, writing samples).	Self-corrections made to a student essay following instruction on combining sentences.

Recording the amount and types of **cueing** during intervention is essential to maintain an accurate record of student performance. Cueing data should include the type of cue provided, how often the cue was needed, and how the cue affected student performance. This information

informs the amount and type of support needed and, therefore, the student's level of independence with a targeted skill. Changes in the amount or types of cueing required may reveal changes in a student's level of independence. Student independence is one factor used to measure progress.

As part of data collection planning, the SLP/SLT should consider continuous and interval data collection. **Continuous data collection** involves recording each response for an entire session or activity. **Interval data collection** involves recording all responses within a specified time frame (e.g., three five-minute samples) or for a certain number of responses (e.g., the first 20 and the last 20 trials). Pre- and post-testing is also a form of interval data. Planning ahead ensures that data collected will be appropriate measures of student performance.

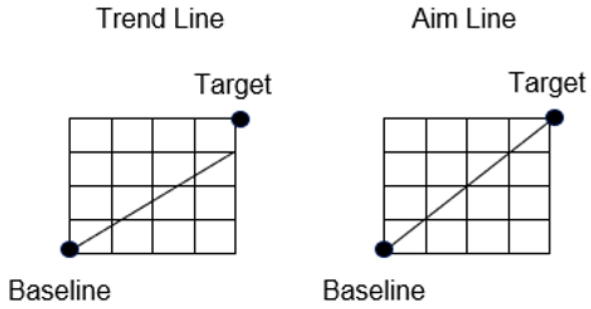
Evaluation of Outcomes

Data collected should be reviewed by speech-language pathologists/speech-language technicians at regular intervals and analyzed to determine outcomes. Each IEP goal must include specific measurement criteria, including a baseline, and should drive the data collected and analyzed. The review of data at naturally occurring times (progress reporting and annual IEP meeting) also informs SLPs and IEP teams if adjustments to the program should be considered.

Graphs of data provide a picture of progress and can be used effectively with students and parents to discuss changes in performance for specific skills or show change over time. When a clear target is set for a skill, this can be included on the graph as the target or goal.

Plotting features such as aim lines and trend lines provide a visual of the target and performance trends. Trend lines also may provide an estimate of future performance and help the team predict targets for future IEP goals. It is important to review and summarize data periodically to ensure that students are making progress and to assist in determining the need for any changes to the intervention.

Figure 3. Aim and Trend Line



An **aim line** connects the baseline point and target and provides a clear picture of the progress needed to meet the goal. A **trend line** shows the average student performance, even if daily or weekly performance varies. Samples of aim line and trend line graphs are pictured in Figure 3. This trend line shows that the student is not progressing at a rate that will meet the target or goal within the time period. Instructions for creating these types of graphs are provided in Appendix F.

Reviewing the purpose of the graph and its specific features, such as an aim line and a trend line, will help parents and other team members see student progress. Data also can show how changes in instruction have affected the student's progress. The graph should be labeled and contain enough descriptive information for it to be easily understood. It is important to review and summarize data periodically to ensure that students are making progress and to consider instructional changes.

When interventions are successful, documentation should show student progress that exceeds the normal developmental trajectory. In other words, the student should learn more than he or she would have without the intervention or services. The amount of extra progress depends on a variety of factors including the severity of the disability, amount of home practice or support, and student motivation. If a student is not progressing at a rate greater than her or his nondisabled peers, a review of the intervention and amount or type of services should be completed.

Assessment and Evaluation

The purpose of a special education evaluation is to determine whether a student has one or more disabilities; the present level of performance and educational needs of the student; whether the student needs special education and related services; and (for reevaluations) whether any additions or modifications to the special education and related services are needed to enable the student to meet the measurable annual goals in the IEP and participate, as it is appropriate, in the general education curriculum (20 U.S.C. §1414). The ADE/ESS Program Support and Monitoring unit has published a technical assistance document on the Evaluation Process.

When a child is being referred for an initial evaluation, the Individuals with Disabilities Education Act (IDEA) mandates that certain procedural requirements be met a reasonable time before the agency may proceed: a procedural safeguards notice (PSN) and a prior written notice (PWN) describing the referral should be given to the parent. A team, having the same composition as the IEP team and including other qualified individuals if it is appropriate, reviews existing data and determines whether additional data are needed to determine eligibility. This review may be conducted without a meeting but must include information from all relevant team members. The team reviews existing evaluation data on the child including current evaluations and information provided by the parents of the student; current classroom-based and state assessments and classroom-based observations; and observations by teachers and related services providers (34 C.F.R. §300.305(a)).

If the team decides that additional data are needed to determine whether a student is eligible for special education and related services because of a possible communication disorder, a PWN explaining the nature of the assessments that will be completed must be provided to the parent. Additionally, informed written parent consent must be obtained before any new assessment can occur. After these procedural requirements are met, a full and complete assessment of communication abilities should be conducted by the SLP/SLT. Other professionals in the PEA or in the local medical community may complete other assessments as requested by the team.

The evaluation of a student to determine whether he or she has a speech-language impairment should be multifaceted and include multiple data sources (teachers, parents, students, other service providers), different types of data (quantitative and qualitative), a variety of types of measures and procedures (authentic assessment strategies, criterion- referenced measures, norm-referenced tests, dynamic assessment procedures, etc.), and information from several environments (classroom, playground, home) as appropriate for each child. As a result of the evaluation, the eligibility team will have a complete picture of the student's communication abilities and needs. The resulting speech-language evaluation report should:

- provide a comprehensive assessment of the student's communication skills
- identify strengths and weaknesses
- present information for determining whether the student has a speech-language impairment that adversely affects educational performance
- describe the educational needs of the student to access the general curriculum

Speech-language pathologists/technicians should ensure that all components of the evaluation consider language differences and dialect use. Evaluation data that provide evidence of dialect use or language difference should be documented, and these differences may not be considered evidence of a disability. When language differences or dialects are inappropriately viewed as errors, a student may be inappropriately identified as having a disability. Additional information on linguistic and cultural diversity is provided in the special topics section.

IDEA specifies evaluation procedures that apply to all evaluations, including those conducted by SLPs/SLTs. During a speech-language assessment, all procedures, tests, and materials must meet specific conditions. Examples of these conditions include:

- Assessment measures must be provided in the student's native language or other mode of communication unless it is clearly not feasible to do so.
- A variety of assessment tools and strategies should be used to gather relevant functional and developmental information on a student; this must include information related to enabling a student to be involved in and progress in the general education curriculum, or in the case of a preschooler, information related to participation in developmentally appropriate activities. The evaluation materials, including, but not limited to, any norm-referenced tests that were administered, should assist in determining whether the student has a disability and if the student is eligible, in determining the contents of the IEP.
- The assessment instruments must be validated for the purpose for which they are used and administered by trained personnel in accordance with the instructions provided by their producer and should be able to provide evidence of adequate sensitivity and specificity.
- Any measure (norm-referenced, criterion-referenced, or systematic observation) administered by qualified personnel may be used to assist in determining whether the student meets the criteria to determine that a student has a disability and if so, in determining the contents of the student's IEP.
- Any deviation in administration of a standardized, norm-referenced test or criterion-referenced measure must be described in the evaluation report.
- The assessment tools and strategies must provide relevant information that directly assists persons in determining the educational needs of the student.

As required under the regulations that implement the IDEA at 34 CFR §300.304(b), no single procedure can be used as the sole criterion for determining an appropriate educational program for a student. Therefore, PEA policies recommending the use of cut-off scores in qualifying students for speech services are not appropriate. For example, "Students must score at or below 2 SD on a standardized test in order to become eligible for speech services" is not a compliant or defensible statement. Policies should propose including a variety of measures for determining eligibility.

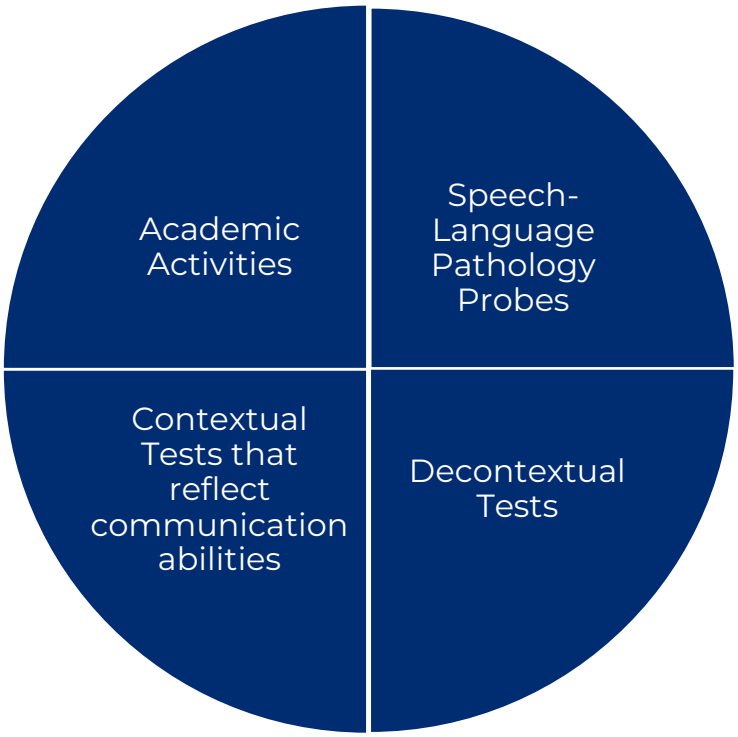
Comprehensive Assessment

A full and individual assessment is mandated by special education regulations. This process is critical to determining the existence of a disability and necessary for educational planning for the student. **Assessment** refers to data collection and the gathering of evidence, whereas the term **evaluation** refers to the process of interpreting assessment evidence and determining the presence or absence of an impairment to inform eligibility decisions.

Assessment Sources

A comprehensive assessment requires four types of information, as shown in Figure 4. Two sources, academic activities, and contextual tests, provide information that documents how a child communicates in the school environment and how speech and language abilities impact educational achievement. For preschool-aged children who do not participate in a formal school program, these data will be gathered from parents and caregivers. Preschool data should focus on participation in the home and community and in developmentally appropriate activities.

Figure 4. The Components of Comprehensive Assessment



The remaining two assessment sources, SLP/SLT probes and decontextualized tests, are specific to the field of speech-language pathology. IDEA regulations make it clear that screening for instructional purposes is not evaluation (34 C.F.R. §300.302). Most, if not all, information will be collected after parent permission for evaluation has been obtained. Half of the school-based data assessment information will be gathered through observations in different settings, while the remaining half will be gathered through examinations of measures of academic achievement that are common to all children. Within the areas of speech-language pathology– specific data sources, half of the assessment information should come from systematic observations of communication functions, while the remaining half may come from tests of specific speech-language skills. The use of both observation and measurement for the four data sources is shown in Figure 4. Gathering data of each of these four types will be described further in the next sections.

Information to Include in an Assessment

A comprehensive assessment provides a picture of a student's functional speech and language skills in relation to the ability to access the academic or vocational programs and to progress in the educational setting. Assessment does not rely solely, or even primarily, on norm-referenced assessment instruments to determine a student's communication abilities. Spaulding, Plante, and Farinella report, "The practice of applying an arbitrary low cut-off score for diagnosing language impairments is frequently unsupported by the evidence that is available…" (2006).

Instead, a variety of sources must be used to gather information about the student's communication skills in school. A comprehensive speech-language assessment includes performance sampling across multiple skills, with multiple people using different procedures in varied contexts. It is essentially developing a database of a student's abilities across tasks and

settings (Secord, 2002) to examine a student's communicative functioning in an educational program. Therefore, it is the responsibility of the school-based speech-language pathologist to assess the student in a variety of contexts, and using a variety of methods so that the team may determine the educational impact of any speech-language impairment.

A comprehensive assessment should include evaluation of discourse skills (longer language sequences) through one or more of the following methods: (1) language sampling, (2) narrative sampling, and (3) assessment of the student's metalinguistic/metacognitive skills. Methods of assessment for each of these elements include criterion-based and norm-referenced measurements; observations, including those in the classroom; and artifact analysis, such as class worksheets and student assignments. These assessment elements provide a baseline of performance, contribute critical information to how a student's communication skills affect his or her access to learning and the grade-level curriculum, and provide a means to document qualitative changes in the student's communication skills over time. Because learning in school is a highly metalinguistic and metacognitive process, a student's ability with these tasks must be assessed as part of a comprehensive assessment.

A comprehensive speech-language assessment is student-centered, descriptive, and functional. It should answer the following questions:

- What is the student's current level of communication development?
- Is there evidence of a language difference or dialect?
- What can the student do without supportive prompts and what can the student do with appropriate support and scaffolding? That is, what is the student's ability to learn speech and/or language to communicate needs effectively in an academic environment and what is the student's ability to use speech and/or language effectively to access curriculum content?
- What is the result of the student's current speech-language difficulties as demonstrated by functional performance in classroom activities and on assignments, on curriculum benchmarks, and in academic testing?
- What language skills does the student need to be successful in his or her educational setting?
- What challenges does the student have in the educational environment? In what situations do these challenges occur?
- How do the speech-language skills adversely affect the student's educational performance?
- What strategies are in place to assist the student to develop his or her speech- language skills? How does use of these strategies affect the student's academic performance?

Answering these questions requires substantial use of school-based information, which may have been gathered during the review of existing data and/or after consent has been obtained. This type of information includes documents, work products, and testing data that result from the student's participation in educational activities. These artifacts are the result of the student's interactions with teachers and staff members (not the SLP/SLT) and provide data about the child's functional communication abilities in the educational environment. School- based data are collected through both systematic observation and direct measurement.

Observations of Academic Activities

Systematic observations of school performance include reviewing educational records, collecting evidence of academic performance (including documents from class assignments, independent and group work, homework, class tests, and portfolios of class performance), and completing observations in a variety of educational contexts (classes, playground, extracurricular activities, lunch, etc.). These observations provide insight into the student's speech-language performance during real communication tasks.

The purpose of these systematic observations is to gather evidence about the student's functional communication skills. Systematic observations that reveal students' abilities to use speech and language to meet their academic and social needs may take many forms, including using published or locally developed classroom observation checklists to record observations. Review of student work (artifact analysis) can be used to obtain information from curriculum- based assessment and to evaluate phonology (speech sounds), morphology (word roots, affixes, etc.), syntax (word order), semantics (word meanings), pragmatics (social language and word contexts), sequencing, and attention. For example, if student work reveals difficulty with use of suffixes and morphemes (e.g., past tense, -ed, plural, -s), the SLP/SLT should note if this is also present during the student's response to probes. The SLP's/SLT's analysis of the speech- language components of school-based information reveal the educational impact of a communication deficit.

Examining a collection of student work samples that document a student's achievement in specified areas is not designed to compare a student to others but instead to document an individual student's current level of functioning and progress over time. For information gathered via artifact analysis, the work must clearly identify the tasks, the student's performance, and the student's communication strengths and deficits. Student work samples may be used to document progress or as a tool for students to assess their own work. Language Disorders from Infancy through Adolescence: Assessment and Intervention (Paul, R., 2006) provides detailed information about use of student work in assessment.

It may be particularly useful to review samples of a student's written language. Unedited writing samples can be helpful in identifying inadequate or limited syntactic structures, morphological errors, semantic misunderstandings, and phonological misperceptions (as seen in spelling errors). Information gathered from written language samples can confirm the functional impact of language deficits or reveal language areas that may need further assessment.

Curriculum-Based Assessment

Curriculum-based assessment uses the student's educational curriculum as the framework for the collection and analysis of student work and focuses on what the student knows and is able to do. It takes place in the student's natural educational environment and provides meaningful information to the family and teacher. Curriculum-based assessment for a student with a speech-language impairment will investigate the student's communication skills and weaknesses within the context of the language and communication demands of the curriculum and educational environment. A curriculum-based assessment conducted by a speech-language pathologist addresses the following areas:

- the speech-language skills and strategies needed by the student to participate in the general curriculum
- strategies the student currently uses
- skills, strategies, or compensatory techniques that the student must acquire
- classroom instruction accommodations and modifications that will provide the student with greater opportunities for success

Tests and Measures of Academic Achievement

Contextual measures of school performance and academic achievement are an integral part of the educational process for all students. Norm-referenced tests are regularly administered to almost all students to evaluate their academic achievement in comparison to their peers.

Students are regularly assessed on their academic skills in the areas of reading, writing, and math through state achievement assessments. Students in Grades 3 through 8 will take the AzMERIT (or an alternative chosen for this purpose) in ELA (which includes reading and writing) and Math at their grade level. Students in grades 4, 8, and high school will take AIMS for Science. Students with significant cognitive disability take an alternative assessment, the MSAA (Multi-State Alternate Assessment). These students are also assessed with the AIMS A Science test in grades 4, 8, and 10. These types of testing are not part of an individualized assessment for special education. Instead, these tests are completed by all students within the context of participation in the education system for accountability purposes. These measures are administered to groups of students by teachers (not SLPs/SLTs) to assess all students' general academic progress. The results of these tests become part of each student's educational record.

Completing these measures requires students to actively use their oral and written language abilities including semantic, syntactic, morphological, metalinguistic, and literacy skills. As such, these measures do not directly assess components of speech-language ability but, instead, reflect a student's ability to activate language skills to support academic performance. These contextualized tests and measures can be important sources of information about a student's academic skills and progress and may help document the educational impact of a speech-language impairment.

Using Arizona's College and Career Ready Standards

For the speech-language pathologist/technician to adequately identify the impact of any speech-language impairment on the student's academic performance, the SLP/SLT must have a thorough understanding of the general education curriculum. Arizona's College and Career Ready Standards (AZCCRS) are the framework for the curriculum taught in every classroom in Arizona. The AZCCRS clearly demonstrate the need for effective communication skills, as illustrated by:

- the phonological and phonemic awareness requirements of English in primary grades
- the mastery of syntax and morphology required for oral and written language throughout the grades in English and other content areas
- the mastery of semantics, syntax, and morphology required for understanding mathematical terms and problems
- the ability to use pragmatic skills to make a persuasive presentation in any content area
- the mastery of semantics in the acquisition of content-specific vocabulary in all areas

A copy of Arizona's Academic Standards can be found on the Arizona Department of Education's website. Speech-language pathologists and technicians should also become familiar with the grade-level curricula developed and used within their agency to have a full understanding of the general curriculum requirements each student faces. These provide important and educationally relevant expectations to be used while developing IEPs for students.

Speech-Language–Specific Data Collection: SLP Probes, Tests, and Measures

In addition to school-based information that reveals the student's functional communication abilities and the educational impact of communication deficits, a comprehensive assessment also

requires in-depth analysis of specific speech and language skills. Before this comprehensive assessment can be given, parent permission must be obtained. Like school-based data, SLP-specific evidence is also gathered through systematic observations and measurement.

However, the purpose of these data is to identify if the student exhibits variations in language use (dialect), to identify the type and degree of speech-language impairment, and to develop appropriate recommendations. Cumulatively, the data collected through systematic observation and measurement of specific skills support a determination as to whether a student has a speech-language impairment and the development of appropriate recommendations. Table 6 provides a summary of the advantages and limitations of various assessment procedures.

Observation and Probes of Speech-Language: Specific Skills

School-based SLPs/SLTs complete a variety of systematic observations or standardized probes across an array of speech-language skills. These probes allow the SLP/SLT to fully examine a student's current level of performance in the areas of speech, language, hearing, voice, and fluency. These probes are completed by the SLP/SLT who elicits and documents performance in specific facets of communication as part of a complete individualized assessment.

The purpose of these probes is to provide a clear and complete picture of the student's communication strengths and weaknesses. This information assists the team in determining eligibility and for those students who are eligible, informs the development of IEP goals and treatment plans. However, these procedures cannot replace observations of the student's interactions with peers and teachers in real educational settings because, to some degree, a student's interactions with an SLP/SLT are an artificial communication task.

SLPs are extensively trained in the administration and interpretation of these highly specialized assessment strategies that include collecting case histories, conducting interviews, completing play-based assessments, administering developmental scales or criterion-referenced measures, conducting discourse assessments, completing dynamic assessment procedures, and/or assessing metalinguistic and metacognitive abilities.

Developing a Case History: A case history is essential for gathering information on the development of a student's speech-language skills and should include any significant birth information and medical, academic, and social-emotional functioning. Additionally, a case history can provide information about language models and language use in the community. Interviews with parents, service providers, teachers, and the student provide valuable information about a student's effectiveness in communication. This information can provide insight into how the student's speaking, listening, writing, and reading skills are impacted by the student's speech and language skills in various environments. Student interviews, when appropriate, can disclose the student's perception of his or her communication skills and motivation to address these skills.

Play-Based Assessment: Play-based assessment is a student-centered method for revealing a young child's communication skills in a natural environment. It is designed for children between infancy and six years of age. A transdisciplinary play-based assessment permits an integrated approach to assessing multiple areas of development. Together, parents and professionals interact with the young child to examine a variety of skills (such as talking, eating, drawing, counting, walking, jumping, etc.) at the same time. The transdisciplinary team members often include speech-language pathologists, occupational therapists, physical therapists, psychologists, and special educators. A transdisciplinary, play-based observation supports efficient and concurrent analyses of the student's developmental level, learning style, and interaction patterns across multiple developmental domains. When conducting an assessment with a very young child, using a play-based assessment has some advantages:

- it is conducted in a natural, nonthreatening environment

- it generally involves parents
- it involves several professionals, so a student's skills and deficits are viewed as a complex whole and not in isolated, individual segments
- it identifies service needs, assists in developing educational plans, and evaluates progress
- it permits a student to demonstrate what is known and eliminates the biases of norm-referenced tests that can penalize students with physical and other impairments
- it provides a picture of a student's learning style and strengths and weaknesses
- it is flexible and adaptive

Developmental Scales: Developmental scales are particularly useful with preschool children, students with significant developmental delays, and students with cognitive impairments. There are several valid and reliable published scales that can be used.

Criterion-Referenced Measures: Criterion-referenced measures compare a student's performance on specific skills, grammatical structure, or linguistic concepts to predetermined criteria. These measures permit assessment of communication skills in a social context.

Criterion-referenced measures can have standardized or non-standardized administration procedures. Criterion-referenced measures are dependent on the use of well-documented and validated developmental data (Laing & Kamhi, 2003).

Each assessment method provides advantages and disadvantages. A summary of advantages and disadvantages of some assessment methods is provided in Table 6.

Table 6. Advantages and Disadvantages of Common Assessment Procedures

Method	Advantages	Disadvantages
Checklists, observations, and interviews	Information from multiple perspectives and environments (parent, teacher, student) Easy to administer. Information can relate directly to general curriculum.	Limited ability to compare with grade- or age-level peers. Can be standardized but may or may not be norm-referenced.
Criterion-referenced measures and rubrics	Designed for use in natural environments, such as for preschoolers' interactions with parents and in academic environments. Can include clinician-developed probes. Useful for analyzing quality of responses, documenting progress over time, and developing intervention plans. Essential for determining a student's ability to learn language at the same rate and requiring the same teaching or intervention effort as same-age peers.	Rarely can statistical comparison with grade- or age-level peers be made. Fewer measures available. May be standardized.
Development scales and play- based assessments	Designed for natural environments. Identifies strengths and weaknesses. Easily interpreted	Fewer measures available Can be standardized but may or may not be norm-referenced

Method	Advantages	Disadvantages
Dynamic assessment	Systematic assessment of a student's ability to improve speech-language performance as a result of mediated learning. Provides evidence to distinguish speech-language impairments from speech-language differences (ELL, nonmainstream dialect, at-risk population) Yields data-based recommendations for use in classrooms and intervention plans	No statistical comparison with grade- or age- level peers Limited availability of standardized data- collection formats
Language sampling and speech intelligibility measures	Measures communication skills during functional use Based on natural situations or educationally relevant scenarios, such as narrative production or expository discourse Norm-referenced data for comparison to age- or grade-level peers using Systematic Analysis of Language Transcripts (SALT), Sampling Utterances and Grammatical Analysis Revised (SUGAR), Developmental Sentence Scoring (DSS) database	Can be standardized but may or may not be norm-referenced. Only a few language sample analysis procedures provide norm-referenced data for comparison with age-level peers (e.g., SALT, DSS) Often time consuming
Norm-referenced tests	Objective comparison with age- and grade-level peers Generally reliable and valid measures for students who match the normative sample Widely available Measurable range of average performance	Assessment is in nonrealistic, 1:1 situation Limited normative population Sensitivity and specificity may be unacceptably low for some tests Inappropriate for planning intervention Inappropriate for documentation of progress Inappropriate for linking to general education requirements
Portfolio review and review of student file	Documentation of student performance in the general curriculum on an ongoing basis Documentation of historical information about the student	Limited ability to compare with grade- or age- level peers Limited validity

Discourse Assessments: These probes of language skills assess ability beyond the single-sentence level. Discourse assessments allow analysis of comprehension and expression in sequences of multiple utterances. These types of assessments include oral and written language samples, conversations, narrative samples (storytelling), and analysis of expository text (formal writing samples).

Discourse can be analyzed for features such as:

- knowledge of macrostructural elements
- evidence of microstructural elements
- general language productivity measures

Examples of the various features for each category are included in Table 7, with additional explanations in Appendix B.

Table 7. Components of Discourse Analysis

Category	Examples of Features
Macrostructural Elements	character, setting, initiating events, number of story propositions and episodes, informativeness
Microstructural Elements	pronoun reference, cohesive devices, tense appropriateness
Language Productivity	overall length, mean length of utterance, communication units, terminable units, syntactic complexity, elaboration, morphological adequacy, lexical diversity

Language Sampling: One kind of discourse skill can be analyzed by collecting language samples. The professional literature in speech-language pathology provides guidelines for best practices regarding procedures for obtaining and analyzing language samples (Evans & Craig, 1992; Miller, 1996) to use as a basis for eligibility decisions:

- To obtain a valid sample for analysis avoid wh- question prompts and yes/no questions. When children are prompted to converse through frequent what-where- which or when questions, the resulting language data (including MLU) is often skewed and yields invalid findings. Alternative conversational prompts, including modeling and "I wonder about . . ." statements are preferable.
- Each sample should consist of between 50 and 100 consecutive utterances in one sampling context.
- Sampling in more than one context and using more than one sample elicitation task (e.g., free play, conversation, narrative) is important since a sampling context itself constrains the characteristics of the language that a student will use (Miller, 2005; Nippold, Hesketh, Duthie, & Mansfield, 2005). To use any of the several normed databases for comparing a student's language sample performance to peers, it is essential that SLPs use the same elicitation tasks and contexts as those on which the norms were developed.
- At some point in the language sampling process, the SLP must create sampling situations that stress and challenge the student's language use and language system (Lahey, 1990). Informal play, interview, or conversational situations may not be fully and sufficiently challenging to identify language performance that interferes with academic success.
- SLPs should audio and/or video record the sample for later orthographic transcription and analysis. The advent of technology makes it much easier to record samples for later, more accurate transcriptions. There is limited research that suggests that in very limited circumstances, it may be possible to complete real-time transcription (i.e., transcribing as the sample is being elicited) with acceptable accuracy. For example, when the sample is from a child who is not very talkative, has quite low-level language (e.g., short MLU consisting of two-to-four-word utterances), and the transcriber is not the same person who is eliciting the sample (Klee, Membrino, & May, 1991). However, trying to use real-time transcription in more typical school situations is likely to lead to an inaccurate and incomplete transcription resulting in unreliable and invalid data on which to base evaluation. "There is not a strong evidence base to the practice of transcribing samples in real time" (Heilmann, 2010, p. 7).

Whatever practices SLPs/SLTs use for language sampling, they should be able to explain their decisions in their reports and during eligibility meetings, based on best practices and evidence from the literature.

Narrative Sampling: Narrative sampling, another discourse skill measurement, is a good way to introduce appropriate challenge to a student's language performance. It also provides information about a student's narrative structure and story grammar. "**Narratives** are stories about real or imagined events that are constructed by weaving together sentences about situational contexts, characters, actions, motivations, emotions, and outcomes" (Petersen, Gillam, & Gillam, 2008, p. 115). Difficulties with narrative comprehension and production may have serious negative effects on students' educational and social achievement (Nation, Clarke, & Marshall, 2004).

Narratives are sensitive indicators of language impairment in students, children, and adolescents with compromised language skills who typically produce shorter, less complete, and less elaborate narratives than their same-age typical peers. Therefore, assessment of a student's narrative abilities is an essential part of a comprehensive speech-language assessment and results should regularly be reported as part of eligibility meetings.

There are several tasks that SLPs/SLTs use to elicit narratives from students. Each has its strengths and weaknesses, and each affects the characteristics of the narratives that students produce. Examples of these include:

- generating a new, creative story
- retelling a familiar child's story (with or without the book) or a favorite movie
- recounting some experience, such as a trip to a circus
- telling a story from a sequence of pictures with or without printed words associated with the pictures (e.g., Frog, Where Are You?, Mayer, 1969)
- telling a story from a single picture (Hughes, Ratcliff, & Lehman, 1998)

As with language sampling procedures, the selection of specific elicitation tasks depends on the purposes that an SLP/SLT wishes to accomplish and the information about a child's abilities that the SLP/SLT wants to know. Resources such as Guide to Narrative Language (Hughes, McGillivray, & Schmidek, 1997) summarize many of the pros and cons of different elicitation tasks. For example, a procedural explanation task (such as explaining how to play Monopoly or baseball) taps a student's ability to sequence steps and organize language but does not tap a student's knowledge of story grammar.

Types of narrative tasks with different elicitation methods can be norm referenced or standardized criterion based. Examples include "The Renfrew Bus Story" (Cowley & Glasgow, 1994), The Test of Narrative Language (Gillam & Pearson, 2004), and Systematic Analysis of Language Transcripts: Narrative Sample Scoring (Miller & Chapman, 2004). As with conversational language sampling, to use any of the norm-referenced or criterion- referenced databases, it is essential that SLPs/SLTs use standardized procedures. Additional information on narrative analysis can be found in Appendix B and The Guide to Narrative Language (Hughes et al., 1997). Table 7 includes features for narrative analysis.

Regarding narrative structure such as story grammar, two cautions are needed. One is that what is considered a typical story grammar in narratives has a strong cultural base. Some cultures, such as those with strong European influences (e.g., white Anglo-American), may have more linear, topic-centered structures, whereas narratives of other cultures, such as Asian-influenced narratives or those with Native American influences may be more topic associated and have more

circular or winding structures (Paul, 2007; Westby & Rouse, 1985). Therefore, to judge the adequacy of a student's narrative structure, an SLP/SLT must consider the student's cultural and linguistic background and understand the nature of narratives produced within the culture.

The second caution is that in some cultures, children are not encouraged or permitted to tell stories because narration is a privilege and responsibility reserved for adults. Consequently, some students may not have experience in storytelling or may be uncomfortable and even reluctant to engage in storytelling. Dynamic assessment and observation approaches are particularly important with these children to determine if a student's different narrative structure is a result of cultural-linguistic differences, language impairment, or both.

There is no one "correct" way to complete narrative sampling and analysis. But, as with language sampling, whatever practices are used, SLPs/SLTs need to be able to explain their decisions in their reports and during eligibility meetings based on best practices and evidence from the literature. The references cited in the discussion above provide sources for SLPs/SLTs to decide on their procedures and support their decisions.

Assessment for the "Metas-"

For students, everything about school and learning involves one or more of the "metas-": metacognition, metalinguistics, or meta pragmatics. When we combine this prefix with another word, it means being able to think explicitly about that word or skill. **Metalinguistics** refers to "the ability to use language to communicate or talk about and to analyze language" and "involves thinking about language, seeing it as an entity separate from its function as a way of communicating" (Reed, 2005, pp. 5–6). Most children and adolescents who do not have issues with their metacognitive or executive functioning abilities use language (metalinguistic abilities) to plan their learning approaches, solve problems, and plan their actions. Adults may coach students to "talk it through." The idea of "talking something through" involves both metalinguistic and metacognitive skills. Students who have academic difficulties are often described as having weak executive functioning abilities or problems with metalinguistics and metacognition.

Individuals use metalinguistic skills to judge the correctness of language and to control how we use it differently with particular people, such as teachers or peers. Learning to read (i.e., associating speech sounds with printed symbols, recognizing that a printed word is a word already known and used in speech, sounding out a word) and reading to learn (i.e., gleaning meaning from a series of printed sentences or extended text that occurs in schoolbooks) are among the metalinguistic tasks students encounter in school. Spelling, learning new vocabulary in vocabulary lessons, using the dictionary, and deciphering mathematics symbols to put them into words are other examples of metalinguistic tasks.

Language arts lessons that involve using prefixes and suffixes to extend vocabulary and derive new words from known roots are classic metalinguistic tasks encountered in school. Research has also established that success in school is associated with students' levels of skill with interpreting and using various aspects of figurative language, which require good metalinguistic abilities (Nippold, Hegel, Uhden, & Bustamante, 1998). Classrooms (including teachers' oral language, written language, and textbooks) from kindergarten through secondary school are filled with frequent instances of figurative language, in particular idioms (Lazar, Warr-Leeper, Nicholson, & Johnson, 1989). Another common weakness for children and adolescents with language impairments involves their difficulties with social skills when interacting with both adults and peers. These students are often weak in their metapragmatic skills. Students who have language impairments commonly struggle with metalinguistic, metacognitive, and/or metapragmatic tasks.

Considering the pervasiveness of metalinguistic, metacognitive, and other meta- tasks in education, assessment of these abilities as a standard part of a comprehensive assessment is important. There are several norm-referenced tests that include subtests that tap language areas related to metalinguistic abilities. These are subtests that deal with figurative language, idiomatic language, ambiguous expressions and multiple meanings, inferences, and verbal humor.

Dynamic assessment processes can also be used to assess students' meta-abilities. Test-teach-retest strategies and a variety of mediated learning experiences, such as explaining to a student the patterns in forming adverbs from adjectives and then following up with additional probes, are excellent tasks to explore a student's analysis of language-based tasks. Classroom activities, homework assignments, and worksheets used in the classroom also provide rich opportunities to assess students' meta-abilities and document the ways in which a particular student's weaknesses have an educational impact.

Norm-Referenced Tests and Measures of Speech-Language Skills

Decontextualized measures of speech-language specific skills are the traditional form of speech- language assessment in which the SLP/SLT administers norm-referenced tests to an individual student.

Norm-referenced measures usually do not distinguish between communication disorders and communication differences due to instructional, cultural, or dialectal experience. Norm-referenced tests are not aligned with the curriculum and do not consider how prior knowledge and experience impact performance. The speech-language pathologist should keep in mind that norm-referenced tests are not contextually based and will provide an incomplete picture of the student's skills. These measures are not sufficient sources of data for determining eligibility for special education or the educational impact of a speech-language impairment. In addition, SLPs/SLTs should carefully consider statistical properties of norm-referenced tests regarding their ability to correctly identify students with speech-language impairments (Spaulding, 2006).

These instruments are designed to parse speech-language abilities into discrete skills according to a particular theoretical framework. These discrete skills are then measured through formal testing procedures, and this formal testing is an artificial communication task. Therefore, these assessment procedures are referred to as decontextualized tests of speech-language abilities. The purpose of these tests is to produce standard scores that allow a student's performance on that test to be compared to that of typically developing peers.

Performance on norm-referenced tests can reveal areas of communication that should be assessed further through systematic observation and standard probes of speech-language skills. Performance on norm-referenced tests does not document functional performance in educational settings. A balanced and comprehensive assessment will include data from all four sources of information, with only a limited amount of data in the form of norm-referenced measures of speech-language skills. A comprehensive assessment does not rely extensively or solely upon decontextualized tests.

Norm-referenced tests are standardized assessment tools that can be used to compare a student's performance with that of age- or grade-level peers. Caution must be taken that the student matches the population used for establishing norms, as described in the test manual. In addition, the test must be administered exactly as prescribed in the test manual. If not, then the statistical scores are not valid and must not be included in the evaluation report or used in the determination of eligibility for special education services. Norm-referenced tests assess a student's current level of performance on a particular task or discrete skill. Poor performance on norm-referenced measures could be due to a disability or to a lack of experience or limited opportunity to learn the skills that are measured on the test. In contrast, dynamic assessment

focuses on the ability of the student to respond to learning experiences. Dynamic assessment includes a test-teach-test approach and mediated learning experiences that examine guided learning to determine the student's potential for change. How well a student performs after assistance is critical information when using dynamic assessment methods. Essentially, dynamic assessment procedures evaluate a student's learning processes and ability to benefit from instruction. As such, the test-teach-retest paradigm can be a highly informative assessment strategy that is particularly relevant for use in school settings.

Dynamic assessment is particularly useful for students from culturally and linguistically diverse backgrounds. After guided practice, students who do not have speech and/or language impairments often show marked improvement in performance. In other words, students who initially perform poorly on tests due to limited opportunity to learn often benefit from supportive teaching and then perform better when tested again. Responsive instruction and Multi-Tiered Systems of Support (MTSS) are instructional approaches that also utilize intervention data to inform decision making. Students who have speech and/or language skills that are readily modifiable in a dynamic assessment or MTSS process are less likely to have true impairments.

Selection and Use of Norm-Referenced Tests

One challenge for the speech-language pathologist/technician is to determine which assessment instruments can be used to accurately characterize a student's communication skills and assist in determining if a speech or language impairment is present. Tests must be able to correctly identify children with language impairment as "impaired" and those with normal language as "normal," as well as meet the psychometric properties of statistical reliability and validity. Table 8 provides a list of factors to consider and may help SLPs/SLTs review tests for possible use. The SLP/SLT must be cautious in deciding which assessment instruments to use. Neither the reputation of the producer of the test nor the fact that an earlier version of a test met specific psychometric standards is a guarantee that the current measure meets the standards. Articles in peer-reviewed journals that "assess the assessments" provide research-based comparisons and provide information about the relative performances of tests in terms of validity, reliability, sensitivity, and specificity.

Table 8. Checklist for Use in Reviewing Norm-Referenced Tests

Test Name: **Edition:**

Reviewer: **Date:**

Check Yes	Check No	Norn-Referenced Test Review Questions
		Does the normative sample represent the most recent census data?
		Is the normative sample large enough?
		Does the normative sample include representative samples of all populations that the test states it measures?
		Does the test meet sensitivity standard of at least .80?
		Does the test meet specificity standard of at least .80?
		Does the normative sample represent the target students in terms of racial-ethnic and geographic status?
		Does the test meet reliability standards of at least .80?
		Is it a valid measure for the planned assessment? (Does the theoretical model upon which the test is based represent currently accepted research?)
		Does the test have test-retest validity?
		Does the test have predictive validity? Is the predictive validity relevant to the purpose of the planned assessment?
		Do the test items or scoring procedures penalize students who are not speakers of Standard American English?
		Does the test manual provide cautions in the use of age-equivalent scores?
		Does the test provide valuable assistance in analyzing a student's communication skills?
		Is this the most recent version of the test?

Sensitivity and Specificity: Current best practices in speech-language pathology include consideration of the sensitivity and specificity of published assessment instruments (Dollaghan, 2004; Spaulding, Plante, & Farinella, 2006). **Sensitivity** means the rate at which a test can correctly identify students with language impairments as having a significant deficit. **Specificity** refers to the rate at which students who have typically developing language abilities are found by that test to have adequate language performance. Sensitivity and specificity are also referred to as type I and type II errors.

For more than a decade, researchers have suggested that norm-referenced measures should have at least 80% accuracy in discriminating language abilities (Plante & Vance, 1994; Spaulding, Plante, & Farinella, 2006). Practitioners are encouraged to review the technical manuals of published tests to ensure that publishers have reported sensitivity and specificity data for norm-referenced tests. When the publisher has not included these data, clinicians should calculate sensitivity and specificity using reported norming data within the test manual or contact the test publisher for the necessary information.

Another resource that can be used to analyze a norm-referenced assessment is Mental Measurements Yearbooks, published by the Buros Institute of Mental Measurements. Publications by the Buros Institute provide information on tests in print, mental measurement yearbooks, and access to current commercially produced tests. The yearbooks provide in-depth

evaluations of norm-referenced tests by assessing their reliability, validity, norming sample, and relationship to other norm-referenced tests.

To have confidence in the outcomes of an assessment process for a student, the speech-language pathologist must carefully consider all of the psychometric properties of norm-referenced tests, review them before using with a student, and be able to support the decision to use specific tests as part of the eligibility or dismissal process. These considerations must be a critical part of any comprehensive assessment.

Reliability and Validity: Reliability refers to the consistency of measurement. It indicates whether an instrument is stable and repeatable—the probability that the instrument would produce similar results if re-administered to the same student under the same conditions by the same tester or by several different testers. It is important to consider reliability of the whole test and each subtest. A review of the test manual should provide information on the following types of reliability:

- test-retest (data that show that the test scores are dependable and stable across related administrations),
- inter-rater (data that show that scoring is objective and consistent across examiners)
- alternate form (different forms of the same test show consistency of performance)
- internal consistency (assumes all the items are measuring the same thing) (Sattler, 1988)

The minimum acceptable reliability is 0.80 (Sattler, 1988). Local standards will determine the acceptable period of time between administrations of the same test, based on the population. For example, the locality may determine that a year is an acceptable standard for students and that six months is the standard for preschoolers.

A measure's **validity** informs the user as to whether a test measures what it purports to measure. The test manual should provide detailed information as to the validity evidence that supports the test's interpretations and uses. Sources of validity evidence (Sattler, 1988) include:

- content validity (adequate sampling of the content areas and if the content areas are generally accepted as the proposed construct)
- concurrent validity (test scores are related to some currently available criterion measure)
- predictive validity (obtained score is an accurate predictor of future performance on the criterion)
- construct validity (how the test items relate to the theoretical construct of the test)

The normative sample for every assessment should be reviewed for several factors. It should be based on the most recent national census data and include representative samples of all populations that the test states that it measures, including gender, ethnicity, race, native language, age, and primary caregiver education level. There is disagreement as to whether the normative sample should also include persons with disabilities (Peña, Spaulding, & Plante, 2006). The sample should include a variety of geographical locations (e.g., urban, rural, and suburban).

Prior to administration with a student, it is important to review the normative sample information to determine whether it is an appropriate fit for the student being assessed. Testing a student

who represents a population not fairly represented in the norming sample would produce invalid results. Best practice is to administer the most recent version of a test because it represents the most current census data and follows updated research on validity and reliability (Jakubowitz and Schill, 2008).

Scoring procedures should be analyzed to determine whether correct answers are based on use of Standard American English, which will potentially penalize students who use other dialects or languages. This information is particularly critical when using norm-referenced tests with students who come from culturally and linguistically diverse backgrounds. In such situations, norm-referenced tests that do not represent diverse groups in the norming sample must be replaced with other assessment procedures to avoid inaccurate results for students from culturally or linguistically diverse populations.

Prior to test administration, the speech-language pathologist/technician should thoroughly review the test manual. This includes analyzing the norming information and test administration guidelines. Failure to comply with the strict, standardized administration procedures of a norm-referenced test invalidates the test results. The standard scores, percentile ranks, and stanines from nonstandard administrations of norm-referenced tests must not be included in evaluation reports. Standard scores are equal interval units and provide statistically valid information about test performance only when resulting from a standard administration with a student for whom the norming sample is representative.

One way to report the results of a nonstandard administration would be to describe the percentage of items correct and the type(s) of errors made on particular tests or the age ranges in which most correct responses fell. If standard administration procedures are altered, the evaluation report should indicate that the test was administered only for informational purposes. Best practices within the profession require that the SLP/SLT practice administering a measure at least once prior to testing a student.

Use of Norm-Referenced Tests for Screening and Assessment

Norm-referenced tests are designed for screening and assessment only, not for selecting goals or determining progress. Therefore, norm-referenced tests should not be used to write IEP goals and objectives or benchmarks, to measure progress towards those goals, or to determine whether a student has met his or her IEP goals and objectives or benchmarks. Norm-referenced tests are used as only one component to determine the possible presence of an impairment and are not achievement tests. Using norm-referenced tests for selecting goals or determining progress is not a valid practice. Likewise, norm-referenced tests should not be used to determine whether a student has met the functional communication outcomes written in the IEP. Systematic observations and functional assessments provide the critical information regarding the changing nature of a student's impairment and its impact on the student's ability to access the educational curriculum.

A very important caution must be noted regarding age-equivalency scores. An age-equivalent score indicates the age at which a certain raw score is mathematically average. Describing a student's performance as equal to that of a student of a certain age is statistically incorrect. It does not consider a range of normalcy as is provided by the standard error of measurement (SEM) for standard scores on a norm-referenced test. Therefore, age-equivalent scores imply a false standard of performance.

Many teachers and parents erroneously assume that an age-equivalent score can reflect a student's standing within a group of same age-peers. Because the age equivalent score is the obtained or estimated average score for that particular age, simple arithmetic shows that for any group of students of a given age, about half will be expected to achieve a lower raw score, and

about half will achieve a higher raw score, giving a broad range of normal performance. Consequently, age-equivalent scores should not be used to determine whether a student has a speech-language impairment or to demonstrate change. Best practice is not to report age-equivalency scores on a norm-referenced assessment.

Students with cultural or linguistic differences, such as speakers of African American English, may encounter content or linguistic bias when they are administered many norm-referenced tests. When eligibility teams focus on norm-referenced tests, it is possible to inappropriately identify a student with a cultural or language difference as having a speech or language impairment. The team should consider many sources of information and discuss cultural and linguistic bias before determining that a student is eligible for special education.

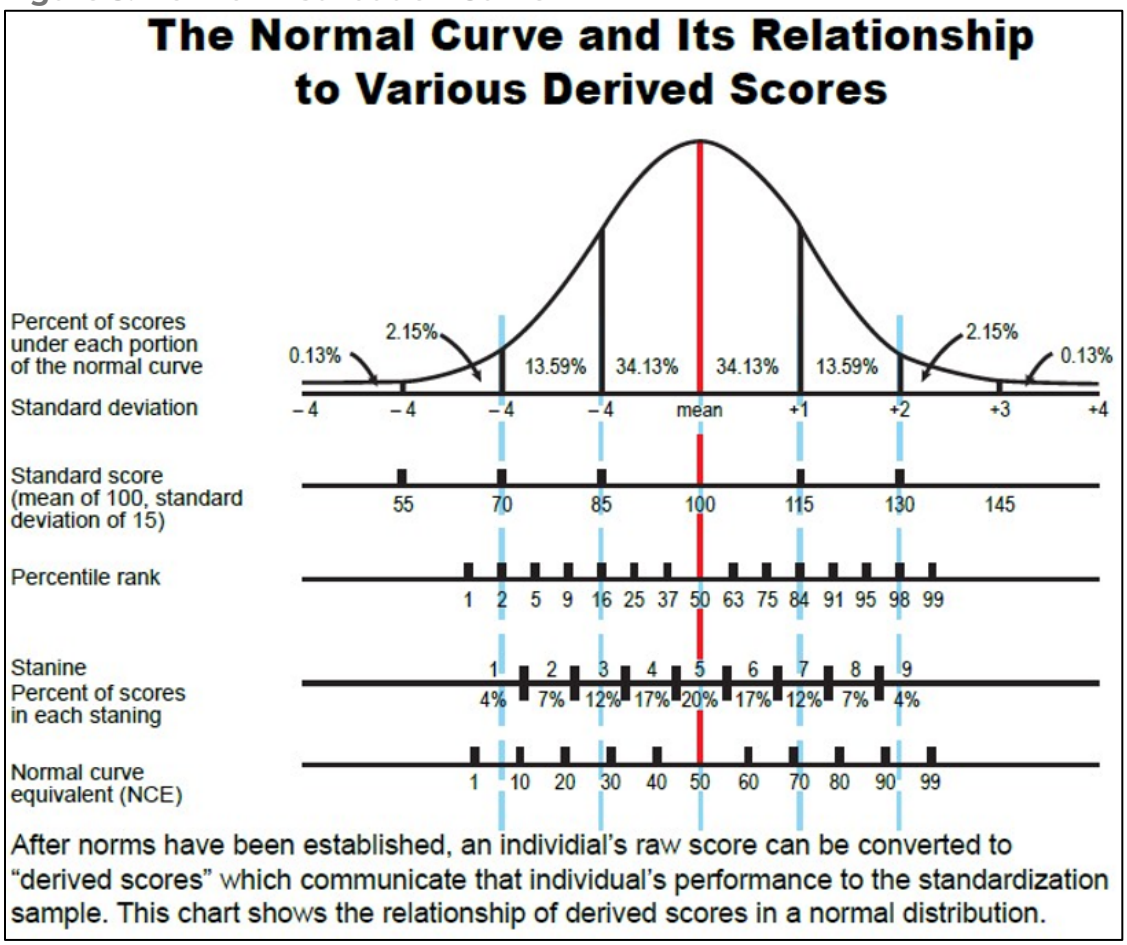
On some occasions, the SLP/SLT may not be able to follow the administration protocol because of a particular situation or a student's particular needs. Examples include a fire drill during the assessment session, interruptions to the testing session, additional time required because of physical limitations, or use of positive reinforcement. Any variation must be documented as a nonstandard administration according to Arizona and federal regulations.

Students with behavior or sensory needs and some disabilities may require supports including providing breaks or reinforcements, enlarging the text or pictures, transferring the test to an alternate input device, and using sign language to present material and to provide responses. The same situation applies when administering a norm-referenced test to a student older than the test norms. Any deviation from the standard administration or use of a test not normed on the appropriate population for the specific student must be reported in the evaluation report. The SLP/SLT should review the test manual, check the publisher's website, or contact the publisher of the test for guidance regarding acceptable adaptations within the guidelines for standard administration. In such situations, the test may be used only to provide descriptive information as the deviation from standard administration invalidates the scoring.

SLPs/SLTs must review carefully the norm-referenced tests they use. Use of multiple norm-referenced tests will be only as accurate as the results of the least accurate test selected. It is better to use a single, well validated, and reliable measure that is normed on a population comparable to that of the target student than to use a variety of norm-referenced measures that are poorly constructed or that used a normative sample that does not represent the target student. See Table 8 for a checklist that can be used when reviewing norm-referenced tests.

Figure 5 is a normal distribution curve, with percentile rank and standard score information, and guidance for using test scores. This diagram may be useful in explaining test results to parents.

Figure 5. Normal Distribution Curve



Interpretation of School-Based and Speech-Language–Specific Data

When the data collection (assessment) is completed, then the information must be interpreted (evaluation) and reviewed by the team. Interpretation of the assessment components requires careful review of norms on norm-referenced assessments and integrating additional data, including systematic observations and contextualized assessments, to create a complete picture of a student's communication skills. It is critical that there not be an overreliance on any one piece of information or assessment source. Assessment data should represent all four sources of information: (1) school-based observation; (2) contextual measures of academic performance and achievement; (3) systematic observation and probes of specific speech- language skills; and (4) decontextualized measures of specific speech-language skills. Standard scores from norm-referenced speech-language tests should be only a small part of the assessment picture. The strengths and needs of the student must be considered within the context of the school, home, and community.

Cognitive Referencing

Cognitive referencing refers to the practice of finding students ineligible for speech-language services when their language skills are deemed to be commensurate with their cognitive or intellectual abilities. IDEA does not require a significant discrepancy between intellectual ability and achievement for a student to be found eligible for special education services, including speech-language therapy. The use of cognitive referencing within an organization to determine eligibility for speech-language services is inconsistent with IDEA's requirement to determine services based on individual needs. Additional information on cognitive referencing can be

obtained in ASHA's technical report "Position Statement on Access to Communication Services and Supports: Concerns Regarding the Application of Restrictive 'Eligibility' Policies (2002)."

The practice of cognitive referencing assumes that the psychometric properties of each of the standardized assessment instruments used to assess language and cognitive abilities are similar. This is not true since each measure has different theoretical bases and different standardization samples. Additionally, intelligence measures cannot be assumed to be a meaningful predictor of a student's response to intervention. Students with significant impairments of intellect may respond well to speech-language interventions, therefore improving their ability to succeed academically and in the community. Cognitive referencing uses the question "Who has language skills significantly lower than their nonverbal cognitive skills?" when identifying candidates for intervention. Instead, we should be asking "Who has language and communication skills that are insufficient to support them in the important context of school?" (Nelson, 1995).

Educational Impact of the Speech-Language Impairment

IDEA and Arizona eligibility criteria require that determination of a speech-language impairment includes documentation of the educational impact—how the disability affects the progress and involvement of the student in the general curriculum or for preschoolers, how the disability affects their ability to participate in appropriate activities (34 C.F.R.§300.8 (11); A.R.S. §15-761(34)). Consideration should be given to the academic, vocational, and social-emotional aspects of the speech-language impairment. Academic areas include reading, mathematics, and language arts with the impact determined by grades, difficulty with language-based activities, difficulty comprehending orally presented information, and/or difficulty conveying information orally.

Social areas impacted by a speech-language impairment include interfering with the ability of others to understand the student, peers' teasing the student about the speech-language impairment, the student's having difficulty maintaining and terminating verbal interactions, and/or the student's demonstrating embarrassment and/or frustration regarding speech-language skills. Vocational areas include job-related skills that the student cannot demonstrate because of the speech-language impairment. These include the inability to understand or follow oral directions, inappropriate responses to coworkers' or supervisors' comments, and the inability to answer and ask questions in a coherent and concise manner.

Educational impact may be determined using information from school-based data including contextualized tests and systematic observations. It is also possible to assess the educational impact of a speech-language impairment using teacher/parent/student interview checklists. These would enable a comparison of the student's speech-language skills and needs in two of the most natural environments: home and school (see Appendix F for sample checklists). The Functional Communication Assessment Summary, included in Appendix E, may also provide documentation for educational impact. Statements made by the classroom teacher on the teacher checklist provide contextually based information on the student's speech- language skills and needs in the general curriculum program.

The impact of the student's speech-language impairment and the educational needs of the student to access the general curriculum must be clearly stated in the evaluation summary and within the present levels of academic achievement and functional performance (PLAAFP) section of the IEP. It is the responsibility of the evaluating SLP/SLT to inform the multidisciplinary evaluation team (MET) and the IEP team of the educational impact of the disability in order to determine the level of service needed and to write appropriate, educationally relevant goals.

The Speech-Language Evaluation Report

The speech-language evaluation report should identify the student's preferred mode of communication (oral, sign, augmentative communication). It should include an analysis of

strengths and weaknesses in the areas assessed. Assessment results should be fully explained. The report should indicate the existing and predicted impact of any speech-language impairment on the student's ability to access and progress in the general educational curriculum. Emerging abilities may serve as prognostic indicators in determining a student's potential for improvement. The evaluation report should reflect the interrelationship of a variety of factors that impact communication. These include the student's age, attention skills, cultural/linguistic background, sensory deficits (hearing/vision), and other health factors.

All speech-language assessment reports should be written in easily understood language without extensive use of professional jargon. The goal of the assessment report is to communicate valuable findings to enable all team members, including the parents, to meaningfully participate in the eligibility discussions. When professional terminology is used, it should be clearly defined (e.g., for phoneme, use the layperson's phrase "speech sound").

Comprehensive Assessment Summary Forms

This document includes Comprehensive Assessment Summary Forms for speech production, language, fluency, voice, and functional communication. These forms are designed to describe a student's speech-language impairment, based on assessment that used multiple sources of data and considered multiple aspects of communication. These forms are valuable tools for describing the student's speech-language impairment, communicating with eligibility and IEP team members, and providing consistency among speech-language pathologists. There is no requirement to use the comprehensive assessment forms; each agency may set its own policy regarding their use. Appendix E includes summary forms for speech production, language, voice, fluency, and functional communication.

The multidisciplinary evaluation team (MET) considers the summary of all data in conjunction with Arizona eligibility criteria and other information as the team determines eligibility. Additionally, a particular level of impact does not specify or predict a certain level of service.

The Comprehensive Assessment Summary Forms emphasize the use of academic activities and measures along with probes and norm-referenced tools to describe the communication disorder. Accordingly, no reference is made to cognitive or intellectual functioning. Decisions to provide services and decisions concerning severity are made solely on observations of the student's performance on assessments of language in conjunction with observations concerning the student's performance on functional language tasks. See Appendix E for the Comprehensive Assessment Summary Forms.

Primary Eligibility vs. Related Service

When the speech-language disability is the child's sole or primary disability, the child is eligible for speech and language services as special education instruction. When it accompanies some other disability and the child needs speech and language services to benefit from the special education designed to address that disability, the child is eligible for those services as a related service.

A **related service** means a service required to assist a child with a disability to benefit from special education (34 C.F.R. §300.34). Typically, a student must be found eligible for special education to receive related services, including speech therapy. However, in Arizona a child with a group B disability, such as an orthopedic impairment (see A.R.S. §15-901(B)(12) for a list of group B disabilities) can receive an "ancillary service" even if the student is not receiving any special education services (See A.R.S. §15-769(D)).

A student may be found eligible for special education in another disability area and may receive speech and language services as a related service. For example, a student with an intellectual disability or autism may not meet the Arizona eligibility criteria for SLI because the

communication difficulties demonstrated are an inherent and expected component of the primary disability. However, this same student may still require speech-language therapy as a related service to benefit from the special education program. When a student is eligible for special education, the IEP team may make decisions regarding the need for related services, including the addition of related services, or the discharge from them, if the IEP team determines they are no longer needed for the child to benefit from special education. It is not necessary to reconvene the eligibility committee, unless required by local procedures.

Clarification on this topic may be found on the Arizona Department of Education's Dispute Resolution Unit webpage.

Does the school need to conduct a formal evaluation to add a related service to an IEP? Schools must ensure that children are assessed in all areas related to the suspected disability. [34 C.F.R. § 300.304(c)(4)] Accordingly, if a secondary disability is suspected, then the school should proceed with an evaluation (in accordance with all procedural requirements). If the child's IEP team determines that additional special education and/or related services are necessary in order for the child to receive a free appropriate public education, but no additional disability categories are suspected, the team may revise the IEP without further evaluation.

Does the school need to conduct a formal evaluation to remove a related service from an IEP? The regulations that implement the IDEA state that "a public agency must evaluate a child with a disability . . . before determining that the child is no longer a child with a disability." [34 C.F.R. § 300.305(e)(1)] However, if the IEP team is merely making a determination that a related service is no longer needed, no evaluation would be required before removing that related service from a student's IEP. Put another way, because the related service is part of the student's FAPE, the student's need for such a service is an IEP team decision. However, if a student, for example, qualifies for special education under the category of speech-language impairment (SLI) and receives speech services in that regard, and the IEP team believes that the child no longer requires speech services, then the school must begin the evaluation process to determine whether the student continues to be a child with a disability. (If the student's MET determines that no additional assessments are needed and that the team has sufficient information and data to make a determination, then no additional assessments would be required, but the school would still need to complete the evaluation process.)

Individualized Education Program (IEP) Development

As with any eligibility determination, when the MET determines that a student has a speech-language impairment (SLI) that requires intervention as a primary special education or related service, an individualized education program (IEP) must be developed within 30 calendar days of the date of the student's eligibility. The purpose of the IEP is to identify the child's present levels, develop measurable annual goals, describe the supports and services the child needs to meet those goals, and describe the educational placement in which the child will receive those services.

The IEP team is a multidisciplinary team that includes one or both of the student's parents, not less than one regular education teacher of the student, not less than one special education teacher or provider of the child, a representative of the PEA, an individual who can interpret instructional implications of evaluations, and the student, when appropriate. In the case in which a student is receiving speech therapy as the only special education service, the SLP/SLT is fulfilling the role of special educator and is therefore, a required team member. In the case in which speech therapy is being provided as a related service, the speech-language pathologist/technician is typically a member of the team. Although this is not a legal requirement, it is certainly best practice.

An IEP must be a written statement, but there is no legal requirement that a specific form be used to develop an IEP, and Arizona does not require the use of a standard statewide IEP form. Each PEA develops its format locally and uses paper forms or software that should guide the development of a fully compliant and appropriate IEP. For additional information about what constitutes such an IEP, refer to ESS's Program Support and Monitoring unit's guidance document, IEP Policy and Procedure Checklist.

Additional technical assistance regarding the development of IEPs may be found in ADE's document "Process for Developing Individualized Education Programs" ADE's Monitoring Guide Steps are used to provide compliance guidance for IDEA programmatic monitoring, and are also available on the ADE/ESS website.

The IEP team considers: the strengths of the child; the concerns of the parents; the results of the most recent evaluations; and the child's performance on any state or PEA assessments. In addition, the IEP team must also consider the following special factors (34 C.F.R. 300.324 (a)(2)):

- the student's communication needs
- the student's need for assistive technology device(s) and service(s)
- the need for any accommodations in the administration of state- or PEA-wide assessments
- for a student whose behavior impedes his or her learning or that of others, when appropriate, the use of positive behavioral interventions, strategies, and support to address that behavior
- for a student with limited English proficiency, the language needs of the student as they relate to the student's IEP
- for a student who is blind or has a visual impairment, instruction in Braille and the use of Braille
- for a student who is deaf or hard of hearing, the language and communication needs

Present Levels of Academic Achievement and Functional Performance

The statement of the present levels of academic achievement and functional performance (PLAAFP) in the IEP serves to identify a student's current level of functioning, discusses strengths and weaknesses, and may include information provided by parents or the student. This section of

the IEP describes how the student's disability affects his or her involvement and progress in the general curriculum and in the area(s) of need. It includes the student's performance in academic areas (e.g., reading, mathematics, science, social studies) and in functional areas (e.g., communication, behavior, social skills, self-determination).

The PLAAFP should be written in language understandable to all participants (i.e., by avoiding or explaining professional jargon) and written in objective terms. Test scores, if appropriate, should be self-explanatory or include an explanation or interpretation of the scoring. For preschool students, the PLAAFP should include how the student's disability affects his or her participation in activities appropriate for preschoolers. See the IEP document for a checklist of the components to include in a present level of academic achievement and functional performance statement. Data from formal tests, informal tests, observations, anecdotal reports, curriculum-based assessments, interviews, and checklists may be included in the PLAAFP. The use of teacher/parent/student checklists can help ensure that all perspectives are included. Sample forms can be found in Appendix F.

The present levels statement serves as the foundation for the rest of the IEP. There should be a direct relationship between the information in this section and the goals, any short-term objectives or benchmarks, and the accommodations or modifications in the rest of the IEP.

Measurable Annual Goals

Measurable annual goals that address plans for the duration of the IEP must be developed from the information reported in the present levels. Goals should be designed to meet each of the student's disability-related needs and to enable the student to progress in the general curriculum (or in age-appropriate activities for preschool children). The goals should be written to answer the question: **What do we want the student to be able to do in a year?**

Goals should be realistic, prioritized, and written in measurable terms that clearly state the skill or behavior to be achieved relative to an established baseline, the level of independence and or accuracy, and the timeframe for meeting the goal.

Short-term objectives or benchmarks for the annual goal are milestones set at regular increments of time during the year, providing markers to gauge shorter-term student progress. These short-term objectives or benchmarks are intermediate steps to achieving the annual goal and are sequentially arranged along a continuum of difficulty designed to move the student toward mastery of the annual goal. Either benchmarks or objectives are required for students who will participate in alternate state assessments. Benchmarks or objectives are not required for students participating in the regular assessments.

Specially Designed Instruction

IDEA defines **special education** as "specially designed instruction, which is provided at no cost to the parents, to meet the unique needs of a child with a disability." **Specially designed instruction** means "adapting, as appropriate to the needs of an eligible child, the content, methodology, or delivery of instruction to address the unique needs of the child that result from the child's disability and to ensure access to the general curriculum so that the child can meet the educational standards that apply to all children."

The IEP team's discussion of services and supports should be completed after goals have been written. Services are then selected based on the needs of the student and the educational support needed for him or her to (1) meet annual goals, (2) be involved in and progress in the general curriculum, (3) participate in extracurricular and nonacademic activities, and (4) be educated and participate with students without disabilities.

The **services section** of the IEP must include the team's consideration of related services; supplementary aids and services for the student and supports provided to school personnel on behalf of the student; program modifications; and accommodations and modifications in instruction and assessment. The services section should include beginning and ending dates for all services; the frequency, location, and duration of services; and the extent of participation with students without disabilities in general education classes, as well as extracurricular and nonacademic activities. Services should be provided in the least restrictive environment. IEP teams must consider reports and recommendations from outside providers, but they are not required to follow them.

The speech-language pathologist/technician and other staff may develop a **draft IEP**. If a draft IEP is developed, it must be clearly labeled as such and provided to the parents far enough in advance of the IEP team meeting that the parents have time to read the draft in preparation for participation in the IEP meeting as full and equal team members. It is not permissible for an agency to have a final IEP completed before an IEP team meeting begins.

For specific details on this process, the speech-language pathologist must consult local procedures for developing IEPs, convening IEP meetings (meeting notices), and implementing IEPs. When an IEP has been written, a prior written notice describing the IEP and its implementation must be given to the parent and informed written parental consent for initial placement has been obtained. Then the speech-language pathologist must initiate services by the beginning date noted in the IEP. Parental consent is required for the initial provision of services only; annual IEPs do not require consent.

Accommodations, Modifications, and Supports for School Personnel

Accommodations are provisions made to allow a student to access and demonstrate learning. Accommodations allow the student equal access to learning, but do not substantially change the instructional level, the performance criteria, or change the content of the curriculum or a test.

Program modifications are made to provide a student with meaningful and productive learning experiences, environments, and assessments based on individual needs and abilities. Program modifications substantially change what a student is expected to learn and to demonstrate. These changes may be made in the instructional level, the content, or the performance criteria.

Supports for school personnel describe the supports provided to school staff that are required for the student to be provided FAPE. Examples of supports for school personnel include training on specific disability characteristics, in-service training on use of assistive technology or student equipment, or ongoing consultation with teachers.

Postsecondary Transition

No later than the first IEP to be in effect when the student turns 16, or younger if determined appropriate by the IEP team, the IEP must include appropriate measurable postsecondary goals that are annually updated and based upon age-appropriate transition assessments, transition services, including courses of study, that will reasonably enable the student to meet those postsecondary goals, and annual IEP goals related to the student's transition service needs. There also must be evidence that the student was invited to the IEP team meeting when transition services are to be discussed and evidence that, if appropriate, a representative of any participating agency was invited to the IEP team meeting with the prior consent of the parent or student who has reached the age of majority (20 U.S.C. 1416(a)(3)(B)).

For additional resources on transition services, please visit the Arizona Department of Education/Exceptional Student Services/Secondary Transition webpage.

Reviewing the IEP and Reporting Progress

Each IEP must be reviewed at least annually and revised as appropriate (34 C.F.R.§300.324(b)(1)). During this review, the IEP team must address the student's progress (or lack of progress) toward meeting the annual goals; the results of any reevaluation; information provided by the parents; information provided by the teachers; and the student's anticipated needs, including modifications and accommodations.

Standardized assessment should not be used as the sole means to measure progress. The IEP team must look at a variety of data sources, including data gathered by the speech-language pathologist regarding student performance; assessments completed; and teacher, student, or parent checklists. Audio and video recordings may be valuable in demonstrating progress. IDEA requires IEPs to contain a statement regarding how a student's progress toward annual goals will be measured and when periodic reports on progress will be provided. Speech-language pathologists/technicians must follow timelines for reporting progress as identified in the child's IEP. Progress must be reported for each annual goal indicated in the student's IEP.

Sometimes a child demonstrates little if any progress for a period of time, prompting educators to consider dismissing the child from services because of lack of progress. IDEA requires that whenever there is a lack of progress, the IEP team must review the child's IEP to determine whether the annual goals are being achieved and revise the IEP as appropriate to address any lack of progress. Therefore, any decision concerning dismissal of a child who continues to have a speech-language impairment and who is not making progress must take place after an IEP team has reviewed the child's progress and pursued a variety of alterations for achieving progress.

Those options should include changing the frequency and/or duration of speech services provided and working with other special and general education teachers to incorporate the communication goals into their classrooms. This may be especially effective for children with other disabilities (e.g., intellectual disabilities). Some children lack motivation to continue to work on improving their speech-language skills. The IEP team should consider the cause(s) of the motivation problem and may propose a joint effort to address motivation (e.g., working with the school social worker, guidance counselor, or teachers). If the lack of progress is not related to any of the above, the IEP team should consider whether further evaluation might be needed to understand the lack of progress. This evaluation may be conducted by a school- based speech-language pathologist, an outside speech-language pathologist with specialized skills, another school professional, or outside professionals.

Reevaluation

As with all students receiving special education services, if a student is identified with a speech-language impairment, regulations require PEAs to conduct an evaluation at least once every three years to determine if the student continues to be a child with a disability unless the parent and the public agency agree that a reevaluation is unnecessary (34 C.F.R. §300.303(b)(2)). This evaluation includes a review of existing data and may include additional information if it is determined necessary by the team. Reviews may be conducted more frequently if warranted. Reevaluation is not required before a child's termination of eligibility due to graduation or upon a student's reaching the end of the school year in which the student turns 22.

Terminating Services

The decision to dismiss a student from services is based on the same criteria as the decision to find a child eligible. The team should be able to answer yes to the following questions for a child to remain eligible:

- Does the child have a speech-language impairment?
- Is there an adverse educational impact?
- As a result, does the child need special education?

A student may be found no longer eligible for services in the following situations:

- The student no longer has a speech-language impairment
- The student continues to have a speech-language impairment, but it no longer affects educational performance
- The student continues to have a speech-language impairment that affects educational performance, but the eligibility team determines the child does not need specially designed instruction
- The IEP team determines the child no longer needs speech-language related services to benefit from special education (for example, the student's communication needs can be met through the communication goals worked on in the regular or special education classroom).
- The treatment no longer results in measurable benefits, regardless of treatment variables

ASHA's Ad Hoc Committee on Admission/Discharge Criteria in Speech-Language Pathology has developed Admission/Discharge Criteria in Speech-Language Pathology.

When Speech-Language Service Is the Only Special Education Service

Before termination of eligibility when speech is the only special education service provided, a reevaluation is required (34 C.F.R. §300.305). However, this evaluation may be based on a review of existing information and a determination that no additional data are needed. There is no requirement to conduct further assessment unless requested to do so by the parent (34 C.F.R. §300.305(d)). The parent should be informed that special education services, in this case, speech-language services, will cease, and a prior written notice describing the decision should be given to the parent explaining that decision.

Sources of data need not include norm-referenced data: the use of norm-referenced tests to report progress is discouraged. "Norm-referenced tests do not lend themselves to use in monitoring an individual's performance over time. Their use can engender inflated illusions of success or unwarranted delusions of failure and can invalidate their future use as tests of skill" (McCauley, 1984, p. 346). The student's daily performance on activities associated with IEP goals,

performance on class assignments, small- or large-group interactions, parental reports of performance outside the school environment, or student self-reporting should be considered.

When Speech-Language Service Is a Related Service

If a student is receiving speech-language services as a related service, the IEP team may decide as to the necessity for continued speech-language services at an IEP meeting rather than at an evaluation meeting. When the IEP team convenes to discuss the need for continued services for a student receiving speech-language as a related service, all evaluation information should be reviewed and compared to current performance. The IEP team then determines if the information is sufficient to find the student in need of continued speech- language services.

If an IEP or eligibility team decides that speech as a related service is no longer needed, the decision must be documented with a prior written notice for the parent describing the meeting's discussion and that speech-language services will cease as a result. If the parent or another team member does not agree, the issue of educational impact may be revisited. Further discussions with the IEP team, mediation, or a due process hearing may be appropriate, depending on the individual situation.

Preschool Transition and Private Schools

Transition from Early Intervention

When a child transitions from early intervention services provided by the Arizona Early Intervention Program (AzEIP) to school-based services, the child's services shift from those required in IDEA for infants and toddlers to those required for preschool children with disabilities in IDEA. In Arizona, this transition planning must occur for the child between the ages of 2 years, 6 months and 2 years, 9 months. This transition process begins when the agency providing early intervention services refers the child to the public education agency (PEA). The PEA must then determine if the child is eligible for school-based special education and related services. The eligibility decision must be made before the child's third birthday, even though services may start later (e.g., a child's birthday is in late summer, and school resumes two weeks later). If the child is found eligible for services, then the IEP team must consider the content of the individualized family service plan (IFSP). The IEP team is not obligated to replicate the IFSP and should specify services and supports for the child that will provide a free appropriate public education (FAPE).

It is suggested that the school team also consult with the AzEIP service providers regarding present levels of performance and functional needs. The child's parent has the right to request that the early intervention service coordinator, as well as other professionals involved in treatment, be invited to the initial school meetings (e.g., referral, eligibility, IEP). Because of the changes in the child's eligibility; placement; and services (a change in FAPE), a prior written notice describing the changes involved should be given to the parent.

Private School Students with Disabilities

A school district is responsible for identifying children with disabilities attending non-profit private schools located within its boundaries (A.A.C. R7-2-401(D)(4)(b)). Regarding children with disabilities attending for-profit private schools, the school district responsible for child find activities is the district where the parent resides [Letter to Chapman, 49 IDELR 163 (OSEP 2007)]. Under Arizona statutes, homeschooled students are considered private school students (A.R.S. § 15-763(C)). Charter schools are responsible for child identification activities for students enrolled in the charter school (A.A.C. R7-2-401(D)(4)(a)). However, charter schools are not responsible for outreach under the child find regulations because charter schools have no specific geographical boundaries.

When parents decide to place their child with a disability in a private school, the student no longer has the right to receive the free appropriate public education he or she would be entitled to in a public school. Instead, parentally placed private school children with disabilities who have been designated to receive services will have a service plan (not an IEP) that describes the specific education and related services that the district where the private school is located has determined it will make available to the child. Federal regulations state that parentally placed children with disabilities may receive a different amount of services than children with disabilities in public schools (34 C.F.R. §§300.131–134). Children with disabilities placed by their parents in for-profit private schools are not included in the definition of "parentally placed private school children with disabilities." Therefore, they would not be included in the proportionate share calculation or be eligible for equitable services under 34 CFR §§300.130–300.144.

Decisions about the design and development of services to be provided by the district are made in consultation with private school representatives and parents of privately placed children with disabilities. During the consultation phase, IDEA states there must be a discussion of, among other things, the types of services that will be provided and "how, where, and by whom special education and related services will be provided for parentally placed private school children with disabilities." The public school district makes the final decision about the services that will be

provided to eligible parentally placed private school children with disabilities. The IDEA and its implementing regulations are clear that parentally placed private school children have no individual right to some or all special education and related services that they would receive if enrolled in a public school.

Delivery of Services

Students receiving speech-language services should receive therapy from school-based speech-language pathologists/technicians that is:

- curriculum based
- outcome oriented
- integrated with educational activities
- diagnostic in nature
- dynamic, changing as the child's needs change
- structured on evidence-based practices
- designed to ensure access to the general curriculum so the child can progress in Arizona's College and Career Ready Standards

IDEA 2004 directs educators to focus on access to the general curriculum for all students. SLPs/SLTs should select a service delivery approach individualized for each student and may use a combination of approaches for a student during the therapy process. A comprehensive program that supports a student's involvement in academic, nonacademic, and extracurricular programs is necessary to meet a student's needs. Regardless of approaches, a delivery method that utilizes curricular materials or activities that facilitate the language abilities of students, including promotion of metalinguistic and metacognitive skills, is essential to students' academic success. This may be effectively provided in classroom settings, with the SLP/SLT frequently working alongside the classroom teacher (or resource room teacher) in collaborative or co-teaching roles.

Although speech-language pathologists/technicians will maintain a therapeutic focus in their use of curricular materials, activities, and classroom-based interventions, they can ensure effective integration of speech-language pathology services within the educational setting through their consultation with teachers and by providing classroom-based services as part of the service delivery continuum. The focus on performance in the general curriculum requires a team approach, with specific responsibilities shared by various professionals. Reliance on the traditional approach of pull-out therapy, which focuses solely on discrete speech or language skills, is no longer sufficient for all students.

Speech-language pathologists must use evidence-based practice in their choices for service delivery. Evidence-based practice incorporates specific steps, such as identification of clinical issues, review of existing research, definition of expected outcomes, and evaluation of clinical practice. For more information on evidence-based practices, see the section titled Overview of Evidence-Based Practice. Any use of a practice that is not research based should be used on a trial basis, with pre- and post-testing to determine the outcome of that practice for that student (Meline and Paradiso, 2003). When services are based on research-proven strategies, there is improved accountability for students, schools, and families.

Service Delivery Methods

Effective service delivery is dynamic and changes with the needs of a student. A service delivery approach should be selected based on the needs of a specific student; delivery may include a variety of methods at different times for the student, including services provided directly to the student in the classroom, less frequently on a short-term basis in a pull-out setting, or indirectly through consultation with educators and the family. The IEP team makes the decisions about the type and amount of direct and indirect services the student will receive in the least restrictive setting.

Decisions are based upon the child's present level of performance, progress made in services received, assessment results, IEP goals, and any objectives/benchmarks. In addition, the IEP team should consider the advantages and disadvantages of specific settings and the necessity for repeated practice in a controlled environment. No single service delivery model can be used exclusively for all students. Multiple perspectives are needed for students as their needs change. When speech and language services are indicated, the service delivery and clinical methods must focus on achieving the goals in the student's IEP. Regardless of the service delivery model used, it is essential that time be scheduled for regular collaboration with parents, general educators, special educators, and other service providers.

Direct Services

Generally, there are two types of service delivery methods: direct and indirect. **Direct service** is what is typically viewed as "speech therapy": hands-on, face-to-face interactions between the related services professional and the student that may occur in a variety of settings. The IEP team may determine that the student's goals and objectives will be met most effectively through direct services. Direct services may be offered in a variety of settings (the classroom, the cafeteria, the therapy room, or other school settings).

The type of services determined, the location of the services, and the amount of services may be adjusted to meet the needs of a student. Therapeutic treatment must be provided in the least restrictive setting and result in the least amount of disruption to the student's academic day. Wherever direct services are delivered, the speech-language pathologist is still expected to monitor the student's performance within the educational setting so that adjustments can be made to improve student performance and consultations with teachers and parents can occur. This monitoring allows relevant strategies to be carried out through indirect means (see below) at other times.

Students may receive direct speech services in a pull-out or push-in method, or by a combination of both.

Pull-Out Therapy: Sometimes the nature and severity of a speech-language impairment may necessitate those services be delivered by pulling a student out of class. Therapy services provided in an individual or small group setting with intensive specialized instruction in specific skills or strategies are typically referred to as pull-out therapy. This service delivery model generally focuses on remediation of articulation, language, voice, fluency, or swallowing deficits. Pull-out services should be designed in such a way as to minimize adverse effects upon the student's access to the general education curriculum. Further, student's progress should be monitored so that the student may be moved to a less restrictive environment when it is appropriate.

Push-In Therapy: Therapy integrated into the classroom provides individualized service and does not remove the student from the general or special education classroom. This service delivery method allows the student to receive direct therapy from a speech-language pathologist/technician while continuing to receive classroom instruction. Classroom teachers become an integral part of the process as they learn to reinforce speech-language goals, assess student progress, and learn specific techniques that will benefit students with speech-language impairments, as well as assist general education students. This incidental benefit to general education students is a naturally occurring outcome of collaborative service delivery. This is often the appropriate approach for school students struggling with acquisition of content because of their language difficulties.

The speech-language pathologist/technician has exposure to classroom communication including levels of adult and child communication (rate, volume, complexity of language), daily

routines, the language of the curriculum, vocabulary demands, and the student's coping strategies. Using this model, the general or special education teacher and speech-language pathologist/technician jointly plan, teach, and assess the student's progress within the classroom setting.

This type of integrated therapy can involve several approaches to sharing instruction. Throughout the academic week, the teacher may choose to employ strategies learned, use prompts or cues the speech-language pathologist/technician has demonstrated, or monitor students for use of a particular skill. This type of information is especially helpful in determining the educational impact of a speech or language impairment.

While in the classroom, the speech-language pathologist/technician and classroom teacher may present instructional materials collaboratively. With the SLP's/SLT's assistance, these instructional materials and activities can focus on the speech-language objectives of the students receiving speech-language services. The SLP/SLT may use this as an opportunity to provide reinforcement for specific objectives in a more natural setting (the classroom) or gather data on the child's performance in the classroom setting without direct instruction. The speech- language pathologist/technician may work with individual students, small groups, or with the entire class. This method also enables the speech-language pathologist to observe the student in a more natural setting and gather data on his/her use of skills learned in pull-out therapy.

However, only time spent providing direct service to the students with speech-language impairment can be counted toward the frequency and duration of services required on the IEP. Table 10 provides examples of teaching models for integrated therapy.

Table 10. Teaching Models for Integrated Therapy in the Classroom

Team Teaching	Small Group Instruction
The speech-language pathologist/technician: • paraphrases information. • creates graphic organizers. • teaches strategies for vocabulary learning. • teaches strategies for sequencing. • teaches strategies for developing a narrative. • cues and prompts the students. • modifies the language level of instruction to meet students' needs. • cues and prompts the students. • modifies the language level of instruction to meet students' needs.	The speech-language pathologist/technician: • works in small groups instructing targeted students and reviewing academic material. • presents academic material with a focus on enabling students to generalize their communication skills.

Therapy provided in the classroom provides many benefits for students and staff. Because of the SLP's/SLT's unique professional preparation in the area of language development and language impairment, the SLP/SLT may be able to review the language of instruction and provide helpful feedback to classroom teachers. This includes the language levels of texts; the impact of readability, worksheets, and exercises; test formats and question wording; and language levels used in lectures.

Collaboration and consultation with teachers can provide opportunities for the students with language difficulties to take better advantage of the curriculum. Such collaboration and consultation have the potential for generalized benefits to the whole class.

Direct Services on the IEP: Collaboration and consultation with teachers can benefit students with speech-language impairment and has the potential for generalized benefits to the whole class. However, only time spent providing **direct service** to students with speech-language impairment can be counted toward the frequency and duration of services required on the IEP. While therapy provided in the classroom provides many benefits for students and staff and IDEA no longer prohibits the provision of services to nondisabled children (34 C.F.R. §300.208), the IEP must accurately reflect the special education or related services a student receives.

Changing IEP Services: The type, location, and amount of services may be adjusted after the IEP meeting to meet the needs of the student. Changes to the IEP may be made without convening a meeting or redrafting the entire document if the parent and the school agree. The IEP team must be informed of the amended IEP, and the parent may request a revised copy with the new amendments (34 C.F.R. §§300.324(a)(4) and (6)). A prior written notice describing the changes in the program should be given to the parent.

Indirect Services: Whenever a specialist works with a teacher, parent, or other individual who will be responsible for directly working on communication, the services are described **as indirect services**. Sometimes a specialist will consult with a child's teacher or other individuals who frequently interact with an individual with communication impairments about strategies that will improve communication. For example, a specialist might teach a parent how to position a child in a way that promotes good breathing for speech or teach a classroom teacher how to use a picture schedule to facilitate transitions between activities.

Other Service Delivery Methods

Combining Direct and Indirect Services Using a 3:1 Model: One way an SLP/SLT can manage time available for delivering services and performing other responsibilities within the school environment is to use the 3:1 model. This model combines three weeks of direct services with students and one week of indirect services. With this model, three weeks out of each month are designated for direct services with students, and one week for indirect services, such as meeting with teachers, parents, and other specialists; developing treatment materials; and completing paperwork. Using this model, SLPs/SLTs would indicate only the direct services provided for three weeks out of the month on the IEP services page.

During the time designated for indirect intervention for students, the SLP/SLT provides indirect services independent of any IEP, such as:

- Conducting and attending meetings
- Performing screenings and evaluations
- Conducting training and consultations with staff and parents
- Visiting classrooms and conducting systematic observations
- Developing and adapting classroom and intervention materials
- Attending professional development activities
- Collaborating on lesson planning with educators
- Researching topics related to interventions, assessments, disorders, etc.

The 3:1 model provides opportunities for SLPs/SLTs to consult with teachers about students' needs in the classroom, address curriculum pacing, and integrate speech-language goals and classroom curriculum. The American Speech-Language-Hearing Association supports this service delivery model. An example of a compliant statement of services on an IEP for this model would be: Student will receive 30 minutes of speech therapy 3 times per month.

Community-Based Instruction: Many LEAs offer community-based instruction for students with disabilities. Providing instruction and experiences in the community facilitates the development of skills that are required for success in life. Opportunities are provided to practice daily living or work skills during community trips with monitoring and support provided by teachers and other staff. The speech-language pathologist/technician may participate in these outings if the functional setting provides opportunities to monitor the generalization of skills or provides opportunities for structured practice. The speech-language pathologist/technician may also provide consultation services to the teachers who are providing community-based instruction. This service delivery model may be most appropriate as part of a student's postsecondary transition plan.

Intervention for the Metas-: One way to ensure that metalinguistic skills are embedded in and promoted during language-learning activities is to explain the reason and rationale behind the activity to students. Asking students to paraphrase the reasons and explanations aids them in understanding and applying the rationale. Paraphrasing is one metastrategy that can often be an intervention activity aimed at improving a student's meta- skills. Engaging students as young as five years of age in making plans, writing (or drawing) the steps in the plan, and then executing the plan are strategies to address both metacognition and metalinguistic abilities and strengthen executive functioning skills. Plans can become more complex as students progress in the grades.

Wiig's (1989) Steps to Language Competence: Developing Metalinguistic Strategies includes numerous examples and lists of plans and activities designed to foster students' meta-abilities. An important aspect of working with students with meta- weaknesses is encouraging them to take time to think through and plan their responses. Students with learning disabilities, who likely also have language impairment, have typically been conditioned by the educational environment to respond quickly, which is the opposite of what is needed to engage metalinguistic or metacognitive strategies (Reed, 2005).

Services in the Middle and High Schools: "Middle and high school students are a traditionally underserved population for a variety of reasons including limited monetary and personnel resources, as well as a lack of understanding of their needs and how best to serve these students" (Larson & McKinley, 2003). Unfortunately, these students are often underserved at a time when their need for speech services may be greatest. The language levels of the curriculum escalate in middle school, presenting challenges for students with language impairment that they may have been able to manage in the elementary grades.

Middle and high school curriculum and its delivery (e.g., multiple subjects, different teachers with different language styles, content-specific vocabulary, emphasis on reading and writing to learn versus learning to read and write, different schedules requiring good executive functioning skills, and demand for high-level metalinguistic and metacognitive abilities) present new challenges for students with communication disorders. Before considering dismissing a student from speech services at the middle or high school level, an IEP team must carefully consider whether a termination of services is warranted.

Various service delivery options, often those in which the SLP/SLT works with the students in their middle school classes or alongside the content teachers, may be important in supporting these students, if determinations are based on students' needs. The same is true regarding students transitioning to high school, when the language demands of the educational environment again increase dramatically. Transition to high school is an opportunity for an IEP team to engage in thoughtful consideration of how service delivery methods may change based on the demands of high school and the student's disability; it is not a time to automatically discharge a student from all speech services.

Communication Skills Secondary Course: Some PEAs have found it beneficial to offer a course on communication skills at the middle school or secondary level as an elective class for credit. The class may be for a semester or for a year. Communication classes may offer direct instruction to students receiving speech services and their typical peers, addressing oral and written communication skills in home, school, community, and work settings. Promoting and strengthening students' metalinguistic and metacognitive skills are typically an area of focus. Topics generally include rate, volume, eye contact, social communication skills, topic maintenance, and code-switching skills. Speech-language pathologists/technicians may support this type of class by co-teaching, by collaborating/consulting with the teacher, or by some combination.

Scheduling, Service Delivery, and IEPs

Speech-language pathologists/technicians can increase the effectiveness of their treatment if they are able to adopt a flexible approach to scheduling and service delivery. Working with school administrators on scheduling services is a strategy often used by veteran special educators and speech-language pathologists/technicians. Grouping several students in one class can enable the SLP/SLT to enhance opportunities to collaborate with the teacher, decrease disruptions to classrooms, and limit the time students are pulled from a classroom.

If three to five students with similar speech and language needs are grouped in one teacher's classroom, the SLP/SLT can work with the teacher to provide services integrated within the classroom or to select a time for pull-out services that limits disruption to the classroom. By working with one or two teachers per grade level, SLPs/SLTs can efficiently provide services. This can reduce planning time by addressing concerns for multiple students and classroom activities in fewer sessions. This scenario also decreases the need for individual students to be pulled from different classrooms causing disruptions in multiple locations for a single therapy session. This practice is becoming increasingly important with the increased rigor of Arizona's College and Career Ready Standards and Every Student Succeeds Act's requirement that students receive no less than the prescribed amount of instructional time in each content area.

When IEPs are written specifically with this in mind, frequency, duration, and setting can all provide built-in flexibility for a speech-language pathologist/technician. Rigidity in the provision of speech services poses two problems. More seriously, when all students in a PEA receive speech services with identical frequency and duration, this indicates that services are not being individualized to meet each student's needs. Frequency and duration of services, setting, and method of service delivery should vary depending on the needs of the child. This rigidity also unnecessarily restricts the therapist's ability to build flexibility into the delivery of speech services in ways that will both maximize student progress and provide the most efficient use of a therapist's time.

Additionally, flexible scheduling may allow the speech-language pathologist/technician to better capitalize on opportunities to integrate services in the classroom or during school events and to reschedule sessions to accommodate absences. When the IEP team commits to a given number of minutes of services per week or per month without stipulating the number of days or amount of time per day of services, this allows the speech-language pathologist a myriad of scheduling options that can change to best meet the students' needs (see Table 11).

Table 11. Possible Delivery Options for 60 Minutes of Services per Week

Delivery Options	Representative Students
10 minutes, 6 times/week **or** **15 minutes, 4 times/week** **or** **20 minutes, 3 times/week**	Students with articulation, fluency, or voice goals who are generalizing skills Students who benefit from short, intense therapy sessions on a frequent basis (e.g., students with apraxia) Students needing frequent review of specific strategies or devices (e.g., alternative/augmentative communication) out of the classroom setting
30 minutes, 2 times/week	Students who are learning skills such as articulator placement and fluency strategies in a therapy room
60 minutes, 1 time/week **or** **45 minutes + 15 minutes 1 time/week**	Students with language or pragmatic needs who receive therapy in a classroom setting (Note: Some students will benefit from an additional 15 minutes for pull-out sessions to reinforce a particular skill or strategy.)

A less-traditional option is the provision of intense services early in the year, with the amount of time reduced later in the year (e.g., 30 minutes daily for the first quarter; no services for the second quarter; 30 minutes once a week for the third and fourth quarters). This approach can be used to teach a new skill and give the child time to practice it or to accommodate particular curricula or classroom demands and can also be used when students are learning to use an augmentative communication system.

Yet another option may be to schedule the student monthly. This may be most useful for students who are monitoring their own performance and need periodic opportunities to check in with the speech-language pathologist/technician to gauge their progress. It is not uncommon for this level of service to be provided immediately prior to a determination by the eligibility team that the student no longer has a speech-language impairment that adversely affects educational performance and therefore, no longer needs special education and related services.

Any of these service delivery models can be used so long as IEPs are written to accurately reflect the **location, frequency,** and **duration** of the services students receive. This may require a written explanation to clarify; for example, "Jonny will receive 240 minutes a month of direct speech services, to be delivered in the following manner: August–October: 15 minutes, 4 days per week; November–May: 30 min., 2 days per week. These services will not be provided during scheduled breaks in instruction."

Speech-language pathologists/technicians must always provide the total amount of service time written in the IEP, regardless of the wording of the frequency and duration statement. Use of a range (e.g., 30–40 minutes) is not considered acceptable because the service provider and the parents may view the expected time requirements differently. Unfortunately, this type of ambiguity may result in a complaint or a due process hearing. Speech-language pathologists/technicians and their administrators of special education should work together to discuss new service delivery models prior to implementation.

The student's IEP should also specify where services will be provided—in the speech-language pathologist/technician's room; in the general, special, or career-technical education classroom; on the playground or in the cafeteria (or other school locations); in the community; or other specific location. The identification of location may be flexible and should recognize that there may be a valuable opportunity to practice a newly acquired skill in a classroom setting or that a child may need a few sessions of direct pull-out therapy to work on a specific strategy before returning to

classroom-based intervention. When specifying a location on the IEP, it may be appropriate to identify multiple locations for services, as follows:

> *Johanna will receive 60 minutes of services/week in the classroom, in the cafeteria or playground, and/or the speech-language pathologist's room.*

Because IDEA requires that specific locations for services be shown on the IEP, it may be useful to specify that the child will receive services in a variety of locations, such as in the speech pathology room, or in a classroom. This provides flexibility for the SLP to work with the child one-on-one to establish skills, in small groups to practice them in a structured setting, and in the classroom to use them in a more natural environment without having to schedule an IEP meeting for each step of the process. Whatever the type of scheduling option used, it should be clearly documented in the student's IEP and include beginning and ending dates, frequency, and duration statements. If the student's speech or language needs change, the IEP team may need to reconvene to make appropriate adjustments (or the parent may agree to amend or modify the IEP without a meeting) (34 C.F.R. §300.324(a)(4)).

General Education Initiatives

SLPs/SLTs may be involved in a variety of initiatives outside special education such as response to intervention (RtI),/multi-tiered systems of support (MTSS), literacy development, pyramids of intervention, or other programs. The SLP's/SLT's caseload or workload must take into consideration the amount of time the SLP/SLT assists with or performs non-special education tasks.

Response to Intervention (RtI)/Multi-Tiered System of Supports (MTSS)

The response to intervention (RtI) or multi-tiered system of supports (MTSS) process is a multi-tiered intervention model used to identify and serve struggling learners at increasing levels of intensity prior to referral for special education. According to ASHA, SLPs/SLTs may play numerous roles within the RtI/MTSS framework, such as collaboration, program design, and direct intervention. The goal of RtI/MTSS is to foster positive student outcomes and provide intervention prior to the point of providing special education evaluation and services. This does involve a decrease in the amount of time spent providing more traditional and direct special education and related services. SLPs'/SLTs' workloads will need to take into consideration the time needed for indirect services and support activities.

Caseload Establishment

Federal law does not mandate caseload size. Some states have caseload caps; caseload size is not regulated in Arizona although some PEAs in the state do have local caseload caps.

Speech-language pathologists/technicians in schools are encouraged to be actively involved in seeking strategies to manage their caseloads (Power-deFur, 2001b). Strategies include:

- intervention activities at the school site
- collaboration with teachers and administrators
- strategic scheduling and groups
- participation in problem solving
- effective utilization of paraprofessionals
- regular meetings to review caseload size and severity to make adjustments as needed

- review of student data to determine if children have met their goals and should be referred to the IEP team to determine if they are no longer eligible (Power-deFur, 2001a; American Speech-Language-Hearing Association, 2002)

Weighted Caseload Distribution

When a special education director must manage multiple speech-language pathologists/technicians within a PEA, consideration should be made of the characteristics of students, such as their ages and the severity of their needs before determining how caseloads will be apportioned. For example, a student who is enrolled in speech-language services for an articulation error may require less service time, consultation, or preparation time than a student who has an augmentative device and is physically and cognitively impaired. To count these two students equally on a caseload does not reflect the amount of time involved in addressing each student's needs.

The situation described above may be reversed if the student has a severe intelligibility problem, which requires intensive therapy, as compared to a student with significant disabilities who is a proficient augmentative communication user and only requires consultation to monitor equipment. SLPs/SLTs who are advocating for changes may find documentation of caseload or workload responsibilities helpful. Consideration of student needs is important to caseload distribution and management.

Special Topics

Literacy Development

The speech-language pathologist's background in language is a valuable asset to educators when they must address strategies to enhance literacy. The speech-language pathologist may serve as a member of a team developing strategies to enhance literacy for all students, provide services in collaboration with other educators, or provide direct services to children with oral language deficits that limit their ability to learn reading and writing skills. When collaborating with teachers in a classroom, the speech-language pathologist may target the students with speech-language impairments who have oral or written language deficits or both.

To ensure access to the general curriculum, speech-language pathologists must integrate their services with the general education curriculum. Instructional materials used by the student in the primary educational placement provide the best source of materials for school-based speech-language pathologists.

In Arizona, the general education curriculum is based on Arizona's College and Career Ready Standards (AZCCRS). Speech-language pathologists/technicians should be familiar with the language expectations of the AZCCRS in all content areas. Proficiency in the five aspects of language (i.e., semantics, syntax, morphology, phonology, and pragmatics) is necessary in all areas and across all grade levels. The speaking and listening standards have an obvious relationship to speech-language pathology services.

However, other content areas require language proficiency as well. For example, morphological skills are necessary to master fractions (e.g., one-tenth), pragmatic skills are necessary to debate a topic, and syntactic skills are necessary to understand written directions in all content areas. Furthermore, metalinguistic skills (i.e., the ability to use language to reflect on language) are necessary for higher order thinking in all content areas.

Rather than teaching the curriculum, speech-language pathologists/technicians use the curriculum as a source of stimulus materials for the children they serve. This practice will give the children more exposure to the general curriculum and enhance their ability to generalize their skills.

The Arizona Department of Education (ADE) web page has numerous resources that are useful for understanding the general curriculum, including the Academic Standards webpage. Teacher resource guides, enhanced scope and sequence guides, and links to instructional materials can be useful for speech-language pathologists/technicians as they improve their understanding of the language expectations in the curriculum across different grade levels. In addition, a review of the AZCCRS can assist in identifying those language skills a student must master.

The American Speech-Language-Hearing Association (ASHA) takes the position that the speech-language pathologist plays a critical and direct role in the development of literacy for children and adolescents with communication disorders. There is a well-established connection between spoken and written language. Spoken language provides the foundation for the development of reading and writing, and there is a reciprocal relationship in that each builds on the other, resulting in general language and literacy competence. This relationship between spoken language and literacy begins early in a child's life and continues through adulthood. Persons with spoken language difficulties will have challenges with reading and writing and those having difficulties with reading and writing will have challenges with spoken language. There is also a connection between reading and writing and using language strategically for effective communication, thinking, and learning.

Linguistic and Cultural Diversity

The overrepresentation of racially, culturally, ethnically, and linguistically diverse students in special education is well documented and continues to be an area of emphasis for the U.S. Department of Education and the Office of Special Education Programs (OSEP). As required by IDEA regulations (34 C.F.R. §300.646), the Arizona Department of Education (ADE) gathers and examines PEA data to determine if disproportionate representation due to inappropriate identification of racial and/or ethnic groups exists. Students from culturally and linguistically diverse backgrounds often score substantially lower on standardized tests than do their mainstream peers because of language and cultural differences (Ortiz & Ochoa, 2005). Reliance on assessments normed on mainstream, monolingual English-speaking children may result in misdiagnosis of speech and/or language impairment for culturally and linguistically diverse children.

On the other hand, underdiagnosis of communication disorders also occurs in cultural and linguistically diverse children. Often, true communication impairments are mistaken for low proficiency in one or both languages, resulting in children not being identified as impaired when in fact they are. Consequently, these children do not receive the services for speech and language that they need to be academically successful. To prevent such misdiagnoses, SLPs/SLTs and school teams should ensure that their structures, policies, and routines account for language diversity and cultural differences. The term **language diversity** describes the wide variation in communication form, function, and use. For example, variations in vocabulary, morphology, syntax, and phonology may be noted in individuals who communicate in English using regional dialects. Nonnative English speakers may exhibit communication differences because of language differences, accents, or cultural variations.

During the evaluation process and any pre-referral interventions, school teams should first determine whether an area of concern results from a cultural or language difference and/or economic disparity. The team should examine dialectal and cultural variations that exist within the community, and documented efforts should be made to ensure that student performance is viewed using culturally and linguistically sensitive measures. Educators should use the student's community language, not race, when considering dialect use and recognize that accents are a natural part of spoken languages and should not be considered speech or language disorders. Additionally, when students are using dialect features in spoken or written language, clinicians must identify those patterns as typical in order to avoid misdiagnosis of impairment. While classroom teachers can focus on the acquisition of standard grammar in spoken and written language, clinicians should never target these forms in treatment settings, as they are not errors attributable to impairment. Clinicians and classroom teachers should collaborate on strategies to support language standards related to vocabulary and grammar.

Native English Speakers Using a Dialect

When examining a student's language use, the SLP/SLT must first assess the student's linguistic background and determine whether a dialect or accent is possibly being used. This initial determination prevents the misidentification of phonological or morpho-syntactic dialect patterns as evidence of a language disorder.

Some students who use a dialect may also have a language disorder. The SLP/SLT should be able to identify and differentiate a language disorder from a language dialect (Bland-Stewart, 2005). For example, if a first-grade student who uses a dialect does not appropriately use pronouns, articles, demonstratives, or complex sentences, the SLP may suspect a language disorder in addition to the documented dialect use. Once the linguistic background and dialect usage of the student is determined, the SLP/SLT should share this information with other educators and those conducting any assessments to ensure an unbiased examination of student performance. Since

many dialect patterns may be considered “errors” in standard American English (SAE), it is important to provide examples of the specific dialect features used to ensure the student’s language difference is not considered a disorder.

Morphological and Syntactic Features: The SLP/SLT should identify dialectical differences when reviewing language or writing samples, such as marking of tense, plural morphemes, and narrative story structure. Clinicians should locate available resources that describe the dialect features in question before assessment or intervention takes place.

Phonological Features: Dialectically acceptable substitutions of sounds, cluster reduction, and consonant reduction (dropping of a sound) are documented in professional literature. These dialectical differences should not be coded as errors when evaluating a student’s speech production.

Contrastive Analysis: ASHA (1983): No dialectal variety of English is a disorder or a pathological form of speech or language.

For speakers of a nonstandard dialect of English, for example, social varieties such as African-American English or Native American English, regional varieties such as New York City English or Southern American English, foreign varieties such as British or South African English, or English that is influenced by the use of another language such as Spanish-influenced English (also Native American varieties), contrastive analysis should be applied to scoring all articulation, phonology, and morphosyntactic measures. The test or measure should be scored in the following manner:

1. Identify all patterns that are nonstandard.
2. Exclude all patterns from this set that can be explained by a child’s dialect community.
3. Consider everything else to be due to a childhood language disorder.
4. Base diagnosis on the errors identified in step 3. Diagnosis is then made on true errors, not dialect.

According to Oetting and McDonald (2001), children who are speakers of nonmainstream dialects will not all use the same set of dialect features with the same frequency, and that frequency will differ across nonmainstream dialects. In addition, specific language impairment presents itself differently across nonmainstream dialects and children with language impairment will use a subset of dialect features at a higher rate than their typically developing peers (but not all features at a higher rate).

Children who are speakers of Southern African American English who have a specific language impairment tend to zero-mark irregular past tense, demonstrate noninversion of Wh- questions, and are less likely to produce zero-marked irregular third person present forms at a higher rate than their typically developing peers. Speakers of Southern white English who have a language impairment present with zero-marking of irregular past tense, auxiliary do omission, zero-marking of irregular third person present tense, omission of infinitive do, and subject-verb agreement issues with don’t at a higher rate than their typically developing peers. Dialect speakers with a specific language impairment are good at identifying the distributional properties of the dialect to which they are exposed. They are not heavier dialect users than their typically developing peers. They only produce a higher rate of dialect feature use on a few nonmainstream patterns.

Native Speakers of Other Languages

In Arizona, students are assessed for English language proficiency if the reported primary language of the home is something other than English. Children determined to be English language learners (ELLs), are placed in English language development (ELD) classes for four hours

per day. SLPs/SLTs need to know that if they are servicing a child in this program, pull-out services will add to the amount of time that these children are excluded from the general curriculum. For additional information about the Structured English Immersion Model used in Arizona, see the Office of English Language Acquisition Services (OELAS) website.

When students speak more than one language, it is important to examine the rules of both languages, since one language may impact the use of another. When working with native speakers of another language, the SLP/SLT should examine the student's proficiency in English and consider the phonemic, allophonic, syntactic, morphological, semantic, lexical, and pragmatic characteristics of the student's other language.

A comparison of the phonemic inventory (sounds used in a language) of English and the native language will help the SLP/SLT to identify sounds in the native language that may not exist in English or identify sounds in English that do not exist in the native language. Additionally, sounds may not be used the same way or in the same combinations in both languages. For example, in some languages a sound may only be used at the end of a word and not as a word's initial sound.

ASHA provides phonemic inventories for many languages online at their Multicultural Affairs and Resources web page. Additional resources such as Bilingual Language Development and Disorders in Spanish-English Speakers (2nd Edition) by Brian A. Goldstein and Multilingual Aspects of Speech Sound Disorders in Children by Sharynne MacLeod can also provide features of bilingual speech and language use and a diverse set of phonemic inventories. SLPs/SLTs should also consider that lack of familiarity with English may result in hesitations, false starts, and pauses that may not be indications of dysfluent behavior. Loudness, pitch, and prosodic and suprasegmental features may also be impacted by the student's native language.

SLPs/SLTs can support classroom teachers and the evaluation team by providing information on cultural norms and evidence-based patterns of dialect or other languages that should be considered when evaluating student performance. It is important to remember that students who use dialect patterns or features of a native language in spoken or written language exhibit a language difference, not a disorder. These language differences should be addressed outside of special education.

Children from Low-Income Backgrounds

It has been documented in the literature that children from low-income families may demonstrate lower vocabularies (Hart & Risley, 1995) and syntax (Pruitt & Oetting, 2009) than their middle- and high-income peers. Strategies for separating language difference from language impairment include establishing local norms, using dynamic assessment approaches, thorough parent interviews, and multi-tiered systems of support (MTSS). Speech-language pathologists/technicians can provide valuable input to general education teachers to facilitate vocabulary acquisition strategies in the classroom environment to benefit all students.

Eligibility for Speech-Language Services for Culturally and Linguistically Diverse Children

Eligibility for special education for a child with a speech-language impairment must be based on the presence of a speech-language impairment in the child's first language (L1), not the child's limited English proficiency. Care must be given to determine the cause of the communication skill deficits. Figure 5 contrasts the characteristics of students with limited English proficiency alone and limited English proficiency in conjunction with a communication impairment.

When a child with limited English proficiency is referred for an evaluation for special education, the following practices should guide the evaluation:

- Use trained interpreters when interviewing the family or talking to the child in a language other than English.

- Interview the family (or staff from agencies involved with the child) regarding the child's communication skills in comparison with those of peers, siblings, and parents.
- Consider parental concerns about the child's L1 communication skills.
- Consider ELL teacher reports if students appear to exhibit a slower than typical acquisition of English.

Use standardized tests with caution. Tests normed on English speakers only should never be simply translated into a second language and then scored as if the test were administered as intended. If the normative sample for the test does not include a comparable group or if the testing procedure is modified, scores should not be reported. Review the child's written work to identify any language patterns. Perform language sample analysis in both languages.

Language proficiency in bilingual children is fluid and occurs over the course of years. At any time, a student may appear to have a speech and/or language disorder as observed in the classroom. Making a differential diagnosis is challenging for both the bilingual and monolingual speech-language pathologist/technician. However, because we know that culturally and linguistically diverse children are both over- and under-represented, the field has to make a concerted effort to engage in best practice with these students. Students who are mistakenly identified as needing special education services are excluded from the general education curriculum. Exposure to the general education curriculum is the single greatest predictor of favorable post-school outcomes (West, Mazzotti, Mustian, Fowler, Kortering, & Kohler, 2009) and exclusion from general education based on cultural and linguistic diversity is a violation of the student's civil rights (Civil Rights Act of 1964).

Working With Foreign Language Interpreters and Translators

Interpreters can be used when there are no available speech-language pathologists/technicians fluent in the language of the child. The interpreter functions as a link between the school culture and the culture of the student's family. The use of a trained interpreter is preferred; the use of a family member should only be considered as a last resort. The speech-language pathologist/technician should meet with the interpreter prior to the evaluation to explain the purpose and protocols for the assessment, provide descriptions of English terminology, and stress confidentiality and the need for translating verbatim.

Assessment of Culturally and Linguistically Diverse Populations in Arizona

According to the United States Census Bureau (2010), the Latino population has grown 43 percent since 2000. The term **Latino** as defined by the Census Bureau includes persons who trace their origins to Mexico, Puerto Rico, Cuba, Central and South America, and other Spanish cultures. Approximately 79% of Latinos speak Spanish exclusively or in addition to English (Pew Research Center, 2007).

Although there are many languages spoken in the state of Arizona, we place special emphasis in this section on issues related to Spanish because of the demographics of our state. In Arizona, there are approximately two million people who speak Spanish (30 percent of the population); nearly half of these approximately two million Spanish speakers are school-aged children.

The information included below may clarify the federal and state laws related to evaluating and teaching culturally and linguistically diverse populations. Also provided are ASHA position statements and guidelines related to working with this population.

Federal Law: Individuals with Disabilities Education Act (IDEA):

Assessments must be nondiscriminatory (34 C.F.R. §300.304(c)(1)(ii)) and administered in the child's native language or other mode of communication and in the form most likely to reveal accurate information unless it is clearly not feasible to do so.

Assessments must be selected to reflect the child's true abilities rather than limitations in sensory, manual, or speaking skills (§300.304(c)(3)).

Arizona Revised Statutes

The Arizona state statute on English language education (A.R.S. §15- 752) generally requires that students who attend Arizona's public schools be taught in English. The state statute has an important exception for special education, including speech-language services. The statute reads: "Foreign language classes for children who already know English shall be completely unaffected, as shall special educational programs for physically or mentally impaired students." The implication is that speech-language pathologists practicing in Arizona public schools may, under certain circumstances, provide speech-language intervention in languages other than English.

ASHA's Statement on Language Competencies of the Clinician 2013:

1. 3.0 **Role**: Ability to identify the appropriate service provider for clients/patients.
2. 3.1 Bilingual/Multilingual clinician. Native or near-native proficiency in the language(s) spoken or signed by the client/patient. Knowledge and skills related to the impact of the differences between the dialect spoken by the clinician and by the client/patient on the quality of services provided.
3. Clinician without native or near-native proficiency in the language(s)/dialect(s) spoken or signed by the client/patient. Knowledge and skills related to:
    a. Obtaining information on the features and developmental characteristics of the language(s)/dialect(s) spoken or signed by the client/patient (see Language section).
    b. Obtaining information on the sociolinguistic features of the client's/patient's significant cultural and linguistic influences.
    c. Developing appropriate collaborative relationships with translators/interpreters (professional or from the community).

Working with Families:
General Principles: When working with all families, consider the following:

- Be aware of culturally inappropriate settings: sometimes small modifications make all the difference.
- Be aware of misinterpretations of communicative behaviors on your part and on the part of the family. Parents' beliefs about communicating with their children (vanKleek, 1994) differ in terms of
    1. Amount of talk.
    2. How teaching takes place.
    3. Who initiates and directs adult-child conversations.
    4. Whether parents adapt to children or vice versa.
    5. If language acquisition is directly facilitated or achieved through observation.
    6. Who clarifies when the child is not understood.

- Home-school communication mismatch: Is what is expected at home the same as what is expected at school?
- Insensitive SLP/SLT/other professionals: Avoid the assumption that parents don't want to be involved if they aren't active advocates for their children. Are there issues with transportation? Do they understand how to navigate the educational system? Do they understand the purpose of speech-language therapy? Is there a language barrier? Are they allowing you to make all the decisions out of respect for you as an educator/professional?
- Non-English-speaking families: Interpreters are going to be necessary. A precedent for their use should be set as soon as possible. SLPs/SLTs are not always going to be able to speak the family's language, but there are solutions with the help of support personnel. Do not use family members as interpreters. Be sure that all interpreters are trained by you before the assessment takes place.
- During the parent interview, be sure to ask, "Is there a family history of speech and language disorders?" because the answer to this question is a significant predictor of speech-language impairment in children from culturally diverse backgrounds (Pruitt, Garrity, & Oetting, 2010).
- Definition of communication disorder: Does your definition match with that of the family's?
- Other sociocultural/sociolinguistic barriers to service (Peña and Quinn, 1997; Roseberry-McKibbin, 1995):
    1. Low priority for communication disorders
    2. Proficiency in English
    3. Amount of acculturation
    4. Child socialization practices
    5. Beliefs about communication

ASHA has developed the Cultural Competence Checklist: Service Delivery, as a tool to heighten your awareness of how you view clients/patients from culturally and linguistically diverse populations. ASHA has also developed a document about Collaborating with Interpreters, Transliterators, and Translators.

- Maintain appropriate relationships between the clinician, the client/patient, and interpreter/translator.
- Ensure that the interpreter/translator has knowledge and skills in the following areas:
    - Native proficiency in student's language(s)/dialect(s) and the ability to provide accurate interpretation/translations.
    - Familiarity with and positive regard for the student's particular culture and speech community or communicative environment.
    - Interview techniques, including ethnographic interviewing.
    - Professional ethics and student confidentiality.
    - Professional terminology.
    - Basic principles of assessment and/or intervention principles to provide context to understand objectives.

Bilingual Children

Why is there overlap in standardized test performance between typically developing bilingual children and monolinguals with language disorders? Children with disorders perform poorly on standardized tests for internal reasons (i.e., language-learning disability). Bilingual children perform poorly on standardized tests for external reasons (i.e., less experience with each language; knowledge is distributed unevenly across their two languages) (Kohnert, 2012).

It has been found that bilingual children are at no greater risk for language impairment than monolingual children. Bilingual and monolingual children have similar levels of overall knowledge (Peña, Gillam, Bedore, & Bohman, 2011). There are no studies that suggest an impairment that does exist is exacerbated by speaking two languages. Suggesting that parents speak only English with their children to aid in the remediation of language impairment is a suggestion based on no evidence from the literature and is not advised (Peña, Gillam, Bedore, & Bohman, 2011).

It has also been determined that English language learners (ELLs) receiving special education services are disproportionately of Latino background (de Valenzuela, Copeland, Qi, & Park, 2006). Bilingual Spanish-English speaking children are overrepresented as having language impairment in our nation's schools. This could be because, in part, bilingual children tend to perform below average, even in their stronger language. Bilingual children distribute their knowledge across both of their languages; thus, assessment in one language does not truly represent all of a bilingual child's skills (Peña, Gillam, Bedore, & Bohman, 2011).

Determining Proficiency in Bilingual Children: Establishing a child's proficiency in his or her languages is important for separating a language difference from a language disorder. If a child has low proficiency in a language, that child could appear disordered when, in fact, that child simply needs language enrichment (e.g., ELL instruction). If a child has little exposure to a language, that child will not be expected to be a proficient speaker in that language. The purpose is to separate out children with low proficiency from children with underlying language learning disabilities. The first step in determining language proficiency is to gain information on the child's language environment. Acquire percent input and output in each language through parent interview. Ask a parent when the child gets up and goes to bed—this will give you total waking hours. Then ask what a typical day is like for the child. What activities does the child engage in, with whom, and what languages are used? Remember, children might hear one language, but routinely speak another, so percent input and output are not always equal.

Tally the number of hours each day the child (1) hears the primary language of the home, (2) speaks the primary language of the home, (3) hears English, and (4) speaks English. Do this separately for weekends. Divide this number by the total number of waking hours and multiply by 100. This will result in a percent input and output for each language and help obtain a better picture of what to expect in the evaluation session.

Language Assessment in Bilingual Children: There is no single language test that will provide diagnostic accuracy for bilingual children who are speakers of any language (Dollaghan & Horner, 2011). Any test used should be accompanied by supplemental measures.

For any children who are bilingual or multilingual, language sample analysis in ALL languages is best practice. For Spanish-English speaking children, language samples can be analyzed using the bilingual database of the Systematic Analysis of Language Transcripts (SALT)* If the child speaks a language other than Spanish, informal analyses must be performed.

Assuming the clinician is not a native-like speaker of the child's other language, it is critical that the assessment takes place with the assistance of an interpreter. Either play or narrative sampling can be used for standard measures analysis depending on which context is age- appropriate. A

narrative retelling using Frog Where Are You? (Mayer, 1969) must be used to compare your student to the SALT database for Spanish.

Measures to Be Gained from Formal or Informal Analysis of Language Samples: Errors per utterance and length of utterance measures are particularly useful for morphosyntactic skills, and the type-token ratio (a ratio of the number of different words used to the number of total words used) can be used for assessment of semantics.

Language Assessment for Children Who Speak Spanish as Their Home Language: For bilingual Spanish-English-speaking children, use the Bilingual English-Spanish Assessment (BESA)* (Peña, Gutiérrez-Clellen, Iglesias, Goldstein, and Bedore, 2013), a standardized assessment tool that assesses areas of morphosyntax, pragmatics, and phonology and is standardized on bilingual Spanish-English-speaking children in the United States.

Speech Assessment in Bilingual Children: For articulation and phonology, a combination of measures is also recommended, as bilingual children, at times, demonstrate uneven skills across phonological domains (Fabiano-Smith and Goldstein, 2010a; Fabiano-Smith and Barlow, 2009).

Collect a single word and a connected speech sample for speakers of all languages. Take caution when scoring the English test; be sure the student fits the norming population. If the student does not, use the test in a non-standardized manner. For school-aged children, the narrative sample used for your language analyses can serve as your connected speech sample for both languages. Perform the following analyses using the single word data, and use connected speech as a supplement for phonetic inventory analysis and intelligibility ratings:

- Phonetic inventory analysis in both languages (see Fabiano-Smith and Barlow, 2010)
- Phonological pattern analysis in both languages (See Goldstein, Fabiano, and Washington, 2005)
- Percent consonants correct (PCC) in both languages (see Goldstein, Fabiano, and Washington, 2005)
- Percent vowels correct (PVC) (if there is concern regarding vowels) in both languages.
- Contrastive analysis/analysis of cross-linguistic effects (removing any influence of one language on the other from total count of true errors) (see Fabiano and Goldstein, 2005)
- Intelligibility judgments
- Parent interview: Be sure to ask, “Do other people find your child difficult to understand?” (Gildersleeve, Neumann, and Stertzbach, 2005)

Speech Assessment in Children Who Speak Spanish as Their Home Language:

- The criterion-referenced Contextual Probes of Articulation Competence–Spanish (CPAC-S)* (or best available Spanish test) and the best available English articulation test are recommended as formal measures of choice.
- Using toys in play-based settings to generate language samples for phoneme analysis is standard practice when assessing young children. However, with bilingual children, care must be taken to select toys that will provide equal potential for spontaneous production of phonemes from both languages. Some preschool toys, such as the Fisher-Price© Busy Day Home, have been found to provide many opportunities for phoneme and syllable production in both English and Spanish connected speech samples (Fabiano-Smith and Crouse-Matlock, 2012) in combination with other toys for language sample analysis. Clinicians would be wise to collect toys that target the phonemic inventory of Spanish.

- Recent work by Redden and Fabiano-Smith (2012) suggests that the standard 85% consonant accuracy criterion used for English-speaking preschoolers (Austin and Shriberg, 1997) may over-diagnose bilingual children in both English and Spanish. Typically developing bilingual Spanish-/English-speaking preschoolers do not appear to reach this criterion until the age of 5;0. For typically developing bilingual children ages 2;0–5;0, the accuracy range in both languages falls within the 70–80 percent range.

* While it is not the intention of this document to recommend or endorse products for assessment, at the time of publication, the BESA and the Bilingual SALT database are the only two available language assessment tools on the market that provide standard scores for bilingual Spanish-English–speaking children that use a normative sample reflective of the bilingual Spanish-English–speaking children in the United States. They are inexpensive and cost effective. If you have access to other assessment tools with comparable psychometric properties for bilingual children, please contact ADE so that other assessments may be included.

Pragmatic Assessment in Bilingual Children: According to Hearne (2000), children acquiring a second language go through stages of acquisition, including a silent period. This silent period could be misinterpreted as a pragmatic deficit if the SLP does not know what to expect from a child new to the English language and culture. Hearne (2000) describes the following steps:

Stage I: Pre-production (first 3 mos. of L2 exposure)

- silent period
- focusing on comprehension

Stage II: Early Production (3–6 mos.)

- focusing on comprehension
- using 1–3-word phrases
- may be using formulaic expressions (“gimme five”)

Stage III: Speech Emergence (6 mos.–2 yrs.)

- increased comprehension
- using simple sentences
- expanding vocabulary
- continued grammatical errors

Stage IV: Intermediate Fluency (2–3 yrs.)

- improved comprehension
- adequate face-to-face conversational skills
- more extensive vocabulary
- few grammatical errors

Pragmatic Assessment Across Cultures: The following cultural descriptions are generalizations (as many of these characteristics can be found across various racial and ethnic groups), but pragmatic differences should be considered during assessment. Contrast these characteristics with the pragmatic parameters of school. Where are the matches and mismatches? Perform a contrastive analysis when evaluating pragmatics to avoid overdiagnosis.

- African Americans (Terrell and Terrell, 2002)
  - Tend to use situation-centered conversation.
  - Children participate in conversations, but adults do not typically modify for them.
- Anglo-Americans (White): Higher SES (Lynch and Hanson, 1992)
  - Child-centered
  - Chat with children
  - Direct
  - Use many questions
- Latinos (Kayser, 1993)
  - Peer-peer/adult-adult interaction most common
  - Children not typically asked to (a) comment on events, (b) interpret events, (c) repeat information, (d) use information to project into the future
- Native Americans (Westby and Vining, 2002)
  - Child raised by group; less parent-centered
  - Less reciprocal vocalization
  - Less "active" verbally
  - Do not interpret infant vocalizations as meaningful

Diagnosis of Speech-Language Disorders in Bilingual Children: In bilingual children, disorder will present itself across both languages. To diagnose speech-language disorders, look for children who have low skills in BOTH languages. Use the results from both formal and informal testing, in both languages, to place the student into one of these four categories:

Figure 6. Determining a Bilingual Child's Speech Service Needs

Additional References and Resources for Cultural and Linguistic Diversity:

Adger, C. T., Wolfram, W., & Christian, D. (Eds.). (2007). Dialects in schools and communities. Mahwah, NJ: Erlbaum.

Artiles, A., & Ortiz, A. (Eds.). (2002). English language learners with special education needs: Identification, assessment, and instruction. Washington, DC: Center for Applied Linguistics.

Bland-Stewart, L. M. (2005). Difference or deficit in speakers of African American English? What every clinician should know . . . and do. The ASHA Leader, 10, 6–31.

Cazden, C. B. (2001). Classroom discourse: The language of teaching and learning (2nd ed.). Portsmouth, NH: Heinemann.

Collier, C. (2000). Separating difference from disability: Assessing diverse learners. Ferndale, WA: Cross Cultural Developmental Education Services.

Craig, H., Thompson, C., Washington, J., & Potter, S. (2003). Phonological features of child African American English. Journal of Speech, Language, and Hearing Research, 46, 623–635.

Cummins, J. (1981). Four misconceptions about language learning proficiency in bilingual education. NABE Journal, 5, 3–35.

Dollaghan, C. A., Horner, E. A. (2011). Bilingual language assessment: A meta-analysis of diagnostic accuracy. Journal of Speech and Hearing Research, 54(4): 1077–1088.

Godley, A., Sweetland, J., Wheeler, S., Minnici, A., & Carpenter, B. (2006). Preparing teachers for dialectally diverse classrooms. Educational Researcher, 35(8), 30–37.

Goldstein, B. (2012). Bilingual language development and disorders in Spanish-English speakers (2nd ed.). Baltimore, MD: Brookes.

Guitierrez-Clellen, V., & Pena, E. (2001). Dynamic assessment of diverse children: A tutorial. Language, Speech, and Hearing Services in Schools, 32, 212–224.

Hamayan, E. V., & Damico, J. S. (1991). Limiting bias in the assessment of bilingual students. Austin, TX: Pro-Ed.

Kohnert, K., & Derr, A. (2012). Language intervention with bilingual children. In B. Goldstein (Ed.), Bilingual language development and disorders in Spanish-English speakers. Baltimore, MD: Brookes.

McLeod, S., & Goldstein, B. (2012). Multilingual aspects of speech sound disorders in children. Buffalo, NY: Multilingual Matters.

Peña E. D., & Quinn R. (1997). Task familiarity: Effects on the test performance of Puerto Rican and African American children. Language, Speech, and Hearing Services in Schools. 28, 323–332.

Peña, E. D., Gillam, R. B., Bedore, L. M., & Bohman, T. (2011). Risk for poor performance on a language screening measure for bilingual preschoolers and kindergarteners. American Journal of Speech Language Pathology. 20, 302–314.

Peña, E. D., Gutiérrez-Clellen, V. F., Iglesias, A., Goldstein, B., & Bedore, L. M. (n.d.), Bilingual English Spanish Assessment (BESA).

Pruitt, S. L., Garrity, A. W., & Oetting, J. B. (2010). Family history of speech and language impairment in African American children. Topics in Language Disorders, 30(2), 154–164.

Rhodes, R. L., Ochoa, S. H., & Ortiz, S. O. (2005). Assessing culturally and linguistically diverse students. New York, NY: Guilford Press. Roseberry-McKibbin, C. (1994). Assessment and intervention for children with limited English proficiency and language disorders. American Journal of Speech-Language Pathology, 3, 77–88.

Spaulding, T., Plante, E., & Farinella, K. (2006). Eligibility criteria for language impairment: Is the low end of normal always appropriate? Language, Speech, and Hearing Services in Schools, 37, 61–72.

Tabbert, R. (1994). Linguistic diversity in America: Will we all speak "general American"?

Test, D. W., Mazzotti, V. L., Mustian, A. L., Fowler, C. H., Kortering, L., & Kohler, P. (2009). Evidence-based secondary transition predictors for improving postschool outcomes for students with disabilities. Career Development for Exceptional Individuals.

Wheeler, R., & Swords, R. (2006). Code-switching: Teaching standard English in urban classrooms (Theory & Research Into Practice). National Council of Teachers of English.

Willig, A. (1992). In Ortiz, A.: Assessing appropriate and inappropriate referral systems for LEP. Proceedings of the Second National Research Symposium on Limited English Proficient Student Issues: Focus on Evaluation and Measurement.

Dysphagia

Dysphagia is a disorder in swallowing resulting from difficulty moving food through the mouth and into the stomach. As noted in the Discussion Section of IDEA 2004 Part B final regulations, students may be eligible for dysphagia services under the disability category of "Other Health Impaired (OHI)." Dysphagia treatment is within the scope of practice of school based SLPs, provided that they have sufficient clinical training and practice; ASHA specifically states that experience with adult dysphagia does not automatically qualify the practitioner to treat pediatric swallowing issues. SLTs have not had this training or practice and should not treat dysphagia under any circumstances. SLPs who have questions about their qualifications to provide dysphagia services in any setting may wish to consult ASHA's Knowledge and Skills Needed by Speech-Language Pathologists Providing Services to Individuals With Swallowing and/or Feeding Disorders.

What Is the Role of the School-Based SLP in Serving Students with Dysphagia?

According to ASHA's School Services Frequently Asked Questions, "SLPs may be asked to assess and provide speech-language services for students with dysphagia. As noted in the Discussion Section of IDEA 2004 Part B final regulations, students may be eligible for dysphagia services under the disability category of Other Health Impaired (OHI). Recent ASHA surveys indicate that 10% of school based SLPs now provide services to children with dysphagia. School districts are forming dysphagia management teams that include school nurses, SLPs, occupational therapists, physical therapists, and other school personnel. Some of the activities in which teams engage include interpreting medical records, organizing continuing education, developing educational materials, and writing feeding treatment plans. Two ethical considerations are relevant to this area of practice:

Principle 1B: Individuals shall use every resource, including referral and/or interprofessional collaboration, when appropriate, to ensure that quality service is provided.

Principle 2A: Individuals who hold the Certificate of Clinical Competence shall engage in only those aspects of the profession that are within the scope of their professional practice and competence, considering their certification status, education, training, and experience.

For more information, see ASHA's Practice Portal page on Pediatric Feeding and Swallowing.

In the school setting, it is important that teams be established to address the needs of students with swallowing disorders if it is determined that progressing the student's feeding is necessary for the student to access FAPE. More typically, dysphagia is considered a medical issue rather than educational and is not therefore treated in a school setting.

Alterations of texture or consistency that are prescribed by a student's primary care physician should be included in a student's health plan, and the food may be prepared accordingly by trained school personnel. Following medical recommendations to make sure students are safe while eating at school is not considered dysphagia therapy as the intent is not to remediate the dysphagia. It is considered dietary management and may be monitored by school nurses, dietitians, and other health personnel.

If it is determined the student has an educational need for dysphagia therapy, a team approach much be used. The team should be comprised of the following individuals:

1. speech-language pathologist
2. occupational therapist
3. school nurse
4. child's teacher
5. school nutrition director
6. cafeteria manager
7. the child's parent(s)

Note: Most schools have a list of cardiopulmonary resuscitation–trained staff within their schools. These staff members should be made aware of treatment plans and schedules in order that they may be in close proximity to the children with dysphagia during treatment and while they are eating.

Educational agencies should establish policies and procedures related to obtaining medical clearance prior to initiating dysphagia therapy. This team should stay in close contact with the child's parent and physician, in addition to educating the staff on the symptoms of dysphagia and the support available within the school. The school team will be responsible for educating other school staff (principals, teachers, central office administrators) about dysphagia (its definition, treatment, and educational relevance).

As with other areas of speech-language, the American Speech-Language-Hearing Association (ASHA) states that only persons possessing a "competent level of education, training, and experience" should conduct assessment and intervention (ASHA, 2003). Staying abreast of new developments in the field is the responsibility of the individual speech-language pathologist.

Any speech-language pathologist should ensure that his or her skills are current. Ideally, before undertaking therapy, a speech-language pathologist would spend some time shadowing or being coached by a speech-language pathologist with significant experience in this area (Power-deFur, 2000). In some circumstances, a consultation with a person outside the PEA may be required.

Symptoms and Support at School

Speech-language pathologists, occupational therapists, nurses, teachers, parents, and paraprofessionals should be observant of the following symptoms of dysphagia:

- overt signs of aspiration, such as coughing, choking, or a runny nose
- difficulty chewing and moving the food from the front to the back of the mouth, pocketing, food falling from the mouth
- complaints of food "getting stuck in the throat"
- recurrent aspiration pneumonia
- significant weight loss with resulting fragility
- reduced alertness and attention in the classroom
- reduced strength and vitality
- weakened health status
- frequent, prolonged absences due to health issues
- limited social interaction and communication during meals or snack time

Any school staff member or parent with concerns about the child's feeding and swallowing should make a referral to the dysphagia team. The team should complete observations and the dysphagia checklist and assign a dysphagia case manager. The dysphagia case manager should ensure the parents are informed of swallowing concerns from school and are interviewed regarding their observations and concerns in the home. In addition, the case manager will observe the student eating in a natural setting, determine if further assessment is necessary, determine if there is a need for a medical referral, such as a modified barium swallow study, or if there is a need for positioning or diet changes.

If the parents refuse swallowing intervention plans (as is their right through the 1990 Patient Self-Determination Act) after informed discussions with the dysphagia team, then it is strongly recommended that the team request the parent's refusal in writing. This request should acknowledge receipt of the dysphagia report, consequent treatment discussion, and desire for continued unaltered feedings at school.

Additional References and Resources for Dysphagia:

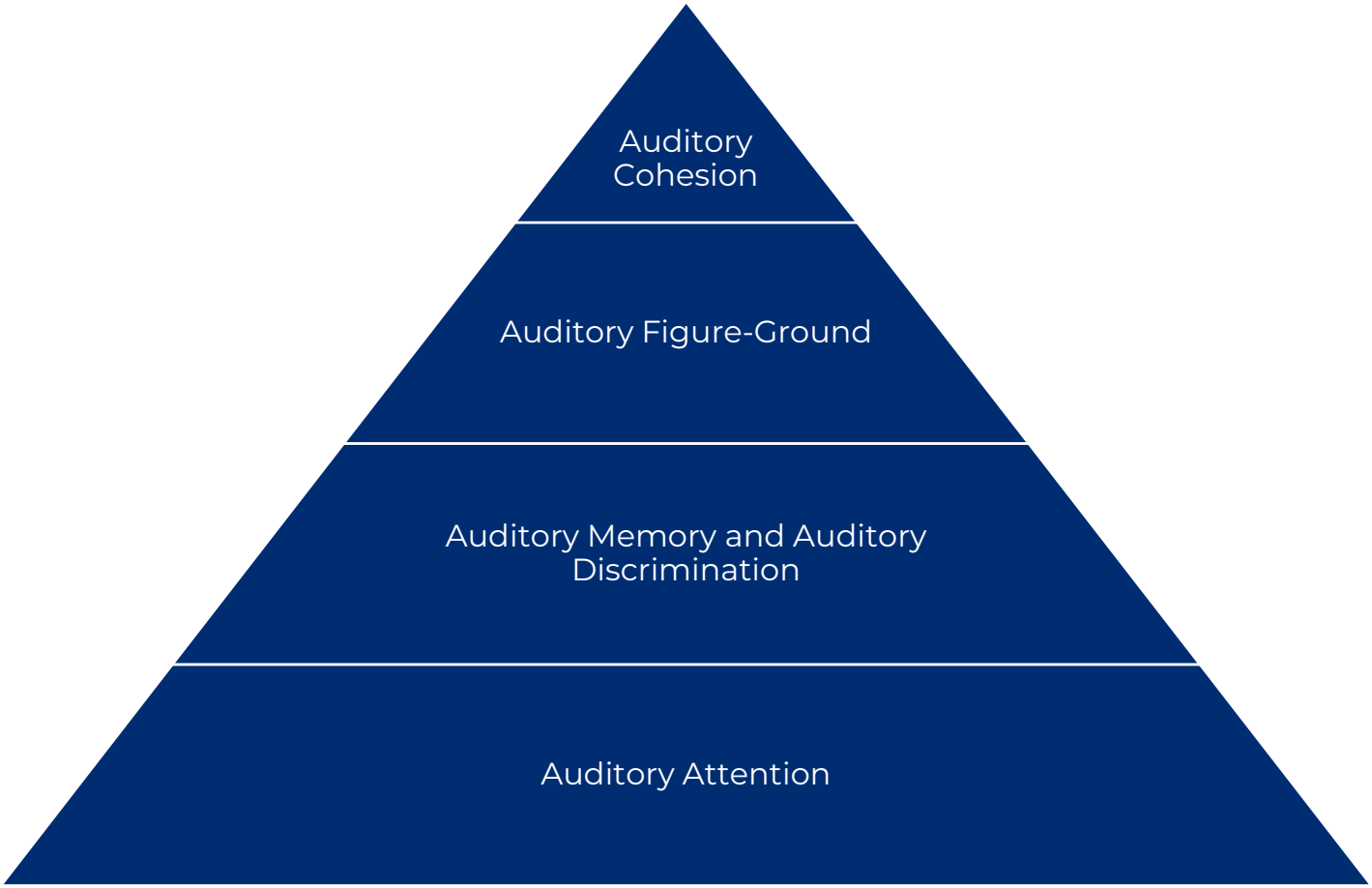
Power-deFur, L. (2000). Serving students with dysphagia in the schools? Educational preparation is essential! Language, Speech and Hearing Services in Schools. 31, 76–78.

ASHA Swallowing and Feeding Disorders: This website contains professional policy documents and special issues such as assessment, treatment, special populations, and additional resources.

(Central) Auditory Processing Disorders

The central auditory nervous system develops and matures at least through age 12. Persons with auditory processing disorders generally develop symptoms of auditory processing deficits at an early age and may continue to experience difficulty with auditory tasks as they mature. Auditory skills build on one another, as shown in Figure 6. Auditory processing disorder is not one of the disability categories outlined in IDEA, nor is it a category of eligibility within the state of Arizona. To qualify as a "child with a disability," the student must have the characteristics of one of the existing disability categories, demonstrate an educational need because of the disability, and require specialized instruction.

Figure 7. Auditory Processing Skills Hierarchy



It is important to note that auditory processing is separate from language comprehension and is not an impairment related to hearing acuity. Children who have impairments in auditory processing may have a diagnosis of auditory processing disorder. Students with auditory processing disorders may have an underlying receptive language disorder and abnormal language scores.

A student with an auditory processing disorder may have difficulty in one or more of the following areas:

- auditory attention – the ability to focus on an auditory signal (speech or nonspeech)
- auditory memory – the ability to remember information presented auditorily, either immediately or after a delay
- auditory discrimination – the ability to hear differences between sounds (speech or non-speech)
- auditory figure-ground problems – the ability to attend to the primary auditory message in the presence of competing auditory signals (e.g., background noise, other speakers)
- auditory cohesion – the ability to integrate information gathered auditorily.

Additionally, it is important to address and rule out other common disabilities that may impact student performance (See Table 12).

Table 12. Overlap Between Auditory Processing Disorders, Attention Deficit Disorders, and Speech-Language Impairments

Attention Concerns

Behavior	Auditory Processing Disorder	ADD/ ADHD	Speech-Language Impairment
Distractibility	X	X	X
Difficulty listening	X	X	X
Difficulty understanding verbal information	X	X	X
Poor attention to auditory detail	X	X	X
Poor attention to visual detail		X	
Forgetfulness of routines		X	
Short attention span		X	
Need for repetition of information	X	X	X
Appears to “daydream”	X	X	
Appears to lack motivation	X	X	
Delayed response to verbal requests	X	X	X
Frequently says, “Huh?” or “What?”	X	X	X
Often misunderstands what is said	X	X	X
Poor short-term memory	X	X	

Hyperactivity, Impulsivity, and Emotional Concerns

Behavior	Auditory Processing Disorder	ADD/ ADHD	Speech-Language Impairment
Fidgety—active hands and feet		X	
Often leaves seat		X	
Excessive movement		X	
Difficulty playing quietly		X	
Talks excessively		X	
Blurts out answers		X	
Restlessness	X	X	
Irritability		X	
Poor social interactions		X	X
Difficulty awaiting turn		X	
Interrupts or intrudes with others		X	X

Academic Achievement

Behavior	Auditory Processing Disorder	ADD/ ADHD	Speech-Language Impairment
Difficulty following verbal instructions	X	X	X
Difficulty identifying, blending, and manipulating sounds	X		X
Poor receptive and expressive language skills	X		X
Deficits in reading, writing, or comprehension	X	X	X
Decreased performance in noisy environments	X	X	X
Difficulty completing work		X	
Worry about academic performance	X		X

Behavior	Auditory Processing Disorder	ADD/ ADHD	Speech-Language Impairment
Frequently loses or misplaces items		X	
Poor organizational skills		X	

Adapted from Chesterfield County Public Schools, 2000.

Management of Auditory Processing Disorder

The following suggestions summarize some key management strategies that may be used for students in general or special education programs:

- Place the child away from noise sources and within 6–8 feet of the speaker
- Work one-on-one or in small groups when possible
- Reduce or eliminate background noises (e.g., audiovisual equipment)
- Increase signal-to-noise ratio by using classroom or individual amplification systems
- Keep doors and windows closed to reduce outside and hall noise; place the child in front of windows and doors to put the noise behind the child

Environmental Modifications

Environmental modifications may be provided to students in general and special education programs. One common example of environmental modification is the use of sound absorbers in the classroom to reduce sound reverberation (e.g., curtains at the windows, acoustical tile ceiling, carpeting, pads such as tennis balls on chair legs for bare floors, and sound-absorbing room dividers and bulletin boards). Another sound modification is increasing the signal to noise ratio though the use of assistive listening devices.

Strategies

There are a variety of strategies that may be implemented to assist a student in compensating for or improving skills related to the auditory skill weakness. Strategies include the following examples:

- Develop the habit of previewing (announcing content), stating (presenting content), and reviewing (summarizing content)
- Teach the child how to manage his or her placement within the classroom to reduce the impact of noise
- Teach the child how to maximize his or her visual strengths to compensate for auditory weaknesses
- Consider the use of a personal or classroom FM auditory trainer (best used on a trial basis with pre- and post-testing to determine the effectiveness)
- Teach the child to ask for clarification; to get organized and maintain a neat desk and calendar; to study aloud (when not interfering with others); to repeat what was said; to take accurate notes, using key words/concepts; and to note communication clues (teacher's voice, time of day, setting)
- Teach auditory discrimination skills through examples of curriculum or age- appropriate vocabulary
- Teach auditory memory enhancement activities (e.g., imagery and drawing)

- Use phonemic awareness, sequencing training, and language building exercises
- Teach mnemonic strategies

These strategies may be provided to students regardless of their special education status and may be implemented by the classroom teacher (especially environmental strategies) or the speech-language pathologist. For eligible students, these strategies should be addressed in the child's IEP or 504 plan.

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Assistive Technology

The increase in the availability of technology in general education, in conjunction with IDEA's delineation of schools' responsibility to provide assistive technology (AT) in the educational setting, has had a significant impact for students with disabilities. It has increased the availability of appropriate AT services and devices for these students to ensure their participation in both academic and social communities. The use of AT can enable students to:

- increase access to and participation in the general education curriculum
- increase productivity
- expand educational and vocational options
- improve communication opportunities and effectiveness
- reduce the amount of support services needed
- increase levels of independence

Assistive Technology and the Special Education Process

Every IEP team must consider whether a student requires AT devices and services and ensure that such devices and services will be provided as needed. The Individuals with Disabilities Education Act (IDEA) defines an **assistive technology device** as:

> Any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of a student with a disability. The term does not include a medical device that is surgically implanted, or the replacement of that device.

And it further defines assistive technology service as:

> Any service that directly assists a child with a disability in the selection, acquisition, or use of an assistive technology device.

These definitions are general and allow IEP teams the flexibility that they need to make decisions about appropriate AT for individual students. These technology solutions include a wide range of no-tech, low-tech, mid-tech, and high-tech devices, hardware, software, and other instructional technology tools that a student's IEP team may identify as necessary for the provision of FAPE.

A team's considerations should not be limited to the devices and services currently available within the PEA. The Assistive Technology Resource Guide, downloadable from the Arizona Department of Education's Assistive Technology webpage, includes a list of AT strategies, modifications, accommodations of tasks, and assistive technology solutions for specific academic and communication areas.

Assistive Technology Teams

The scope of knowledge and amount of service that is required for the successful consideration, assessment, and implementation of AT services is so broad and intensive that determining appropriate devices and services requires a collaborative team approach. Potential members of an AT team include the speech-language pathologist/technician, occupational therapist, physical therapist, special education teacher, regular education teacher, and assistive technology specialist. Those knowledgeable in assistive technology should participate in the evaluation, eligibility (for the service), and IEP teams whenever AT for a student is being discussed.

Consideration and Assessment

The following series of questions can guide the assessment and IEP teams as they consider the need for AT and what type would be required:

- Does the student have any existing AT? If so, are the devices being used to their maximum benefit?
- What are the functional and academic areas of concern and what tasks are the student expected to complete? (Consider communication, instruction, participation, independence, productivity, and environmental control.)
- What should the student be able to do that is difficult or impossible to do at this time?
- What are the environments the student will be in (e.g., classroom, lunchroom, playground, gym, home)?
- What type of AT would be appropriate for the student?
- Are additional AT services needed to enable the student to use a device? (Consider customizing and maintaining devices, coordinating services, and training the student, family, or educational personnel.)
- What is the schedule for reviewing progress toward the goals and objectives that involve AT?

AT may be included in these sections of an IEP:

- In the **accommodations** section of the IEP. An **accommodation** is a change that helps a student overcome or work around the disability, without changing what is being taught to or expected from the student. For example, a student who is nonverbal may be asked to retell a story using the same vocabulary, sentence structure, and complexity as her peers use, but will tell it using a communication device.
- As a **supplementary aid** if its presence (with other necessary aids) supports the student sufficiently to maintain the placement and its absence would require the student to be placed in a more restrictive setting.

- As a **related service**, just like physical therapy, or speech-language services, if the services are necessary for the student to benefit from his or her special education. For a student to be successful in using AT, he or she must be trained in its use. Training to use specialized software, an augmentative communication device, or another similar device can be considered a related service that supports the student's educational program.

Periodic Review

To ensure there is no device "abandonment," use the following questions as reminders of the importance of AT for the student. Is the AT device and/or service:

- effective in its purpose?
- being utilized as planned?
- in need of reevaluation of appropriateness?

The AT team members will also need training to keep their knowledge and skills current. This recurring training may be provided through participation in regional, state, or national training opportunities, distance education, including web-based training or self-study using resources such the Ohio Center for Low Incidence's Assistive Technology Internet Modules.

Northern Arizona University offers an Interdisciplinary Certificate Program in Assistive Technology. This 15-credit-hour certificate is designed to give you in-depth skills and practical competencies in the delivery of assistive technology services through online coursework and hands-on labs.

When a student with disabilities uses AT to perform either in the classroom or in a community-based setting or to accomplish activities of daily living, the IEP team should consider the use of AT in transition planning. Effective transition planning involves a collaborative effort that requires the participation of the student, parents, and professionals from the educational setting, along with community agencies. This collaboration ensures that the AT needs of the student are addressed so that the student's level of independence and function is maintained in the post-school setting.

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Websites for Assistive Technology:

Arizona Department of Education, Exceptional Student Services Assistive Technology Program

Assistive Technology (AT) | Arizona Department of Education (azed.gov)

Arizona Department of Education, Exceptional Student Services Assistive Technology Short-Term Loan Library

(A wide variety of assistive technology devices, equipment, software, and professional development materials available at no cost to school personnel to improve their access to assistive technology.)

Arizona Department of Education, Exceptional Student Services Accessible Educational Materials

Accessible Educational Materials | Arizona Department of Education (azed.gov)

Arizona Technology Access Program (AzTAP)

(AzTAP is a statewide program created in 1994 and operating under the mandate of the Assistive Technology Act of 1998 as amended (P.L. 108-364). AzTAP is funded by the U.S. Department of Education, Rehabilitation Services Administration, Grant Award # H 224A060003. AzTAP's mission is to promote awareness of, access to, and acquisition of assistive technology for persons with disabilities.)

Wisconsin Assistive Technology Initiative

(A complete version of the "2017 Assistive Technology Assessment" package is available for download.)

Telepractice

Telepractice is the application of telecommunications technology to the delivery of speech language pathology professional services at a distance by linking clinician to client/patient or clinician to clinician for assessment, intervention, and/or consultation.

The use of telepractice does not remove any existing responsibilities in delivering services, including adherence to the Code of Ethics, Scope of Practice in Audiology and Scope of Practice in Speech-Language Pathology, state and federal laws (e.g., licensure, HIPAA), and ASHA policy.

The two most common terms describing types of telepractice are synchronous (client/patient interactive) and asynchronous (store and forward).

Synchronous services are conducted with interactive audio and video connection in real time to create an in-person experience like that achieved in a traditional encounter. Synchronous services may connect a student or group of students with a clinician, or they may include consultation between a clinician and a specialist (Department of Health and Human Services, 2012).

In **asynchronous services**, images or data are captured and transmitted (i.e., stored and forwarded) for viewing or interpretation by a professional. Examples include transmission of voice clips, audiological testing results, or outcomes of independent student practice.

Hybrid applications of telepractice include combinations of synchronous, asynchronous, and/or in-person services.

Telesupervision of SLPAs Synchronous observation of therapy services provided by an SLPA meets the criteria for documentation of direct supervision hours. Asynchronous observation must be documented as indirect supervision.

Roles and Responsibilities

Telepractice is an appropriate model of service delivery for speech-language pathologists/ technicians. ASHA requires that individuals who provide telepractice abide by the ASHA Code of Ethics, including Principle of Ethics II, Rule B, which states, "Individuals shall engage in only those aspects of the profession that are within their competence, considering their level of education, training, and experience" (ASHA, 2010).

Roles and responsibilities for SLP/SLTs in the provision of services via telepractice include:

- understanding and applying appropriate models of technology used to deliver services
- understanding the appropriate specifications and operations of technology used in delivery of services
- calibrating and maintaining clinical instruments and equipment

- selecting clients who are appropriate for assessment and intervention services via telepractice
- selecting and using assessments and interventions that are appropriate to the technology being used and that take into consideration student and disorder variables
- being sensitive to cultural and linguistic variables that affect the identification, assessment, treatment, and management of communication disorders/differences in individuals receiving services via telepractice
- training and using support personnel appropriately when delivering services
- being familiar with the available tools and methods and applying them to evaluate the effectiveness of services provided and to measure outcomes
- maintaining appropriate documentation, including informed consent for use of telepractice and documentation of the telepractice encounter
- being knowledgeable and compliant with existing rules and regulations regarding telepractice, including security and privacy protections, reimbursement for services, and licensure, liability, and malpractice concerns
- using web-based technology to engage clients through virtual environments and other personally salient activities (Towey, 2012)
- In Arizona, remote supervision of SLPAs using webcams may not be counted as direct supervision hours

Telepractice is constantly evolving. Ongoing education and training are required to maintain expertise and familiarity with changes in technology and potential clinical applications.

Licensure and Teacher Certification

Current guidance in medical and legal practices indicates that the student's location determines the site of service. As a result, telepractitioners must be licensed in both their home states and in the states in which the students reside. Clinicians planning to do telepractice in a school setting in a state other than where they reside should verify with the Department of Education and the licensure board whether licensure or teacher certification, or both, are required.

Medicaid

Medicaid is a federal/state entitlement program for low-income individuals and families. Each state

- administers its own programs
- establishes its own eligibility standards
- chooses the type, amount, duration, and scope of services
- sets the rate of payment for services

Currently, Arizona's School-Based Medicaid Claiming Program does not provide reimbursement for services provided via telepractice.

Environmental Considerations

Attention to environmental elements of care is important to ensure the comfort, safety, confidentiality, and privacy of clients/patients during telepractice encounters. Room location, design, lighting, and furniture should optimize the quality of video and audio data transmission and minimize ambient noise and visual distractions in all participating sites.

Planning and preparation are needed for optimal positioning of the student, test and therapy materials, and for placement of the video monitor and camera (Jarvis-Selinger, Chan, Payne, Plohman, & Ho, 2008).

School Setting Considerations

Stimulated by shortages or maldistribution of clinicians in some school districts, distances between schools in rural districts, and opportunities to offer greater specialization of services within a district, schools are currently the most common setting in which telepratice services are delivered. Telepractice contracts may be developed with the local education agency or school district, or the services may be provided by speech-language pathologists employed by the district.

The effectiveness of telepractice as a service delivery model in the schools is well documented (Grogan-Johnson, Alvares, Rowan, & Creaghead, 2010; Scheideman-Miller et al., 2002; McCullough, 2001; Grogan-Johnson et. al., 2011; Lewis et al., 2008; Waite et al., 2006).

In addition, parents, clients, and clinicians report satisfaction with telepractice as a mode of service delivery (McCullough, 2001; Rose et al., 2000; Scheideman-Miller et al., 2002; Crutchley & Campbell, 2010).

The administrative body responsible for defining telepractice-based services in a school or school district should:

- ensure that telepractice clinicians (who may not reside in the state where the school is located) meet all state requirements to practice in the school
- make certain that telepractice clinicians have knowledge, skills, and training in the use of telepractice
- recognize that every student may not be best served by a telepractice model and give students the opportunity to receive traditional in-person services
- inform parents that they have the right to decline telepractice services for their child
- provide parents with an informed consent, satisfaction survey, or other feedback option and opportunities to discuss concerns about their child's progress or the telepractice program
- document service delivery via telepractice on the individualized education program (IEP) and during the IEP meeting
- formulate policies that ensure protection of privacy during the services as well as documentation of the services
- provide on-site support for the telepractice sessions, including the assignment of an individual to accompany the student to the session and provide support during the session
- develop a plan for inservicing staff, training on-site facilitators, and maintaining ongoing contact and collaboration with teachers, parents, and other school personnel—thereby ensuring that state standards are met
- develop a system of program evaluation to measure the effectiveness of the service and satisfaction of stakeholders

Facilitators in Telepractice for Speech-Language Services

Although only certified and/or licensed speech-language pathologists/technicians can provide professional services via telepractice, appropriately trained individuals may be present at the

remote site to assist the student. Unless restricted by institutional or state policies or regulations, the facilitator may be a teacher's aide, nursing assistant, or speech-language pathology assistant.

The type of paraprofessional required at the remote site may vary depending on the type of service being provided. It is the responsibility of the speech-language pathologist to direct the session and ensure that the facilitator is adequately trained to assist. Adequate training includes knowledge of and sensitivity to cultural and linguistic differences of clients/patients, as well as the ways such differences may influence participation in telepractice.

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Medicaid Reimbursement in the Public Schools

In 1988 the Supreme Court upheld a Massachusetts ruling, which clearly established that health services provided as part of a child's IEP cannot be denied Medicaid reimbursement merely because they are in an IEP. Also, in 1988, the Medicare Catastrophic Coverage Act was signed into law. This act amended Title XIX to prohibit the restriction of Medicaid funds from reimbursement for services provided to a child with a disability because services were outlined in the IEP. The Conference Committee Report specified that while the state education agencies are financially responsible for educational services, in the case of a Medicaid-eligible child with a disability, state Medicaid agencies remain responsible for the "related services" identified in the child's IEP if they are covered under the state's Medicaid plan.

Participation in the program is voluntary and participation varies by PEA. For a PEA to bill for speech services in the schools, the service must be medically necessary and provided by an SLP with a master's degree and regular SLP license issued by the Arizona Department of Health Services. Services provided by a Clinical Fellow or SLPA can only be submitted for reimbursement if the supervising SLP cosigns. Services provided by an SLT are not eligible for any Medicaid reimbursement.

The Arizona Department of Education, Exceptional Student Services (ADE/ESS), does not oversee the Medicaid School-Based Claiming program, but does assist in facilitating communication between public education agencies (PEAs) and AHCCCS related to the DSC and MAC programs. For more information visit the ADE Medicaid Memos and Communications webpage.

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Westby, C., & Vining, C. B. (2002). Living in harmony: Providing services to Native American children and families. In D. E. Battle (Ed.), Communication disorders in multicultural populations (3rd ed.). Boston, MA: Butterworth-Heinemann.

Additional General Resources:

American Speech-Language-Hearing Association. (1999). Guidelines for the roles and responsibilities of the school-based speech-language pathologist. Rockville, MD: Author.

American Speech-Language-Hearing Association. (2000). IDEA and your caseload: A template for eligibility and dismissal criteria for students ages 3–21. Rockville, MD: Author.

American Speech-Language-Hearing Association. (2002). Appropriate school facilities for students with speech-language-hearing disorders, Technical report. ASHA Supplement 23.

American Speech-Language-Hearing Association. (2002). A workload analysis approach for establishing speech-language caseload standards in schools: Guidelines. Rockville, MD: Author.

American Speech-Language-Hearing Association. (2004). K–6 schools: National outcomes measurement system. Rockville, MD: Author.

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Chesterfield County Public Schools. (2001). Auditory processing: Best practice guide. Richmond, VA: Author.

Connecticut State Department of Education. (1999). Determining eligibility for special education speech and language services. Guidelines for speech and language programs (Vol. II). Hartford, CT: Author.

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Meline, T., & Paradiso, T. (2003). Evidence-based practice in schools: Evaluating research and reducing barriers. Language, Speech, and Hearing Services in Schools, 34, 273–283.

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Moore-Brown, B., & Montgomery, J. (2001). Making a difference for America's children: Speech-language pathologists in the public schools. Eau Clair, WI: Thinking Publications.

Nelson, N. (1996, April). Opening remarks: Are we asking the wrong question? Division 1 newsletter. American Speech-Language-Hearing Association.

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QIAT Consortium. (2003, August). Quality indicators for assistive technology services in schools.

Regulations for Rehabilitation Act of 1973.

Roninson, O. (2003, April). But they don't speak English! Bilingual students and speech-language services in the public school. Special interest division 16 school-based issues. Rockville, MD: American Speech-Language-Hearing Association.

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Shriberg, L., & Kwiatkowski, J. (1982). Phonological disorders III: A procedure for assessing severity of involvement. Journal of Speech and Hearing Disorders, 47, 256–270.

Smit, A., Hand, L., Freilinger, J., Bernthal, J., & Bird, A. (1990). The Iowa articulation norms project and its Nebraska replication. Journal of Speech and Hearing Disorders, 55, 779–798.

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Weiss, C. (1980). Weiss Comprehensive Articulation Test. Austin, TX: Pro-Ed.

APPENDIX A: Web Resources

The following web resources may be useful to speech-language pathologists/technicians, as well as those interested in learning more about the services speech-language pathologists/ technicians provide. It is not an exhaustive list of useful websites. Further, inclusion in this list does not constitute endorsement of the site.

Arizona Resources

Arizona Commission for the Deaf and Hard of Hearing

Arizona Department of Education, main webpage

Arizona Department of Education's Assistive Technology Unit

Arizona Department of Education, Exceptional Student Services

Arizona Department of Economic Security/Division of Developmental Disabilities

Arizona Speech-Language-Hearing Association (ArSHA)

ASHA Speech-Language Pathology Advisory Council

ASHA State Education Advocacy Leader (SEAL) for Arizona

> State Education Advocacy Leaders (SEALs) are appointed by ASHA-recognized state speech- language hearing associations to advocate on education issues. These issues may include caseload/workload, salary supplements, and maintenance of personnel standards in school settings.

Arizona Department of Health Services, Special Licensing Speech and Hearing

Raising Special Kids

National Resources

American Speech-Language-Hearing Association (ASHA)

Teachers of English to Speakers of Other Languages, Inc. (TESOL)

United States Department of Education

Office of Special Education and Rehabilitative Services

Research-Based Practices

American Psychological Association's PsycINFO

ASHA journals

Cochrane Collaboration

Education Resources Information Center's (ERIC) public database

National Evidence Based Practice in Communication Disorders

The National Professional Development Center for Professional Development Evidence Based Practice Briefs (specific to autism spectrum disorder)

APPENDIX B: ASHA's School Services Frequently Asked Questions

- What is the role of the SLP in literacy (reading and writing), and is literacy within our scope of practice?
- What is the role of the school-based SLP in serving students with dysphagia?
- What is ASHA's recommendation for caseload size in the schools?
- Does ASHA recommend using one service delivery model versus another when providing school-based speech-language pathology services?
- Does ASHA have recommended eligibility and dismissal criteria for educational settings?
- Can public schools bill Medicaid for speech-language pathology services?
- Can an SLP employed in a school-based setting also provide services to one of the students on his/her caseload as a private practitioner?
- How does an SLP work as an independent contractor in schools?
- How do I develop a contract to provide speech-language services in schools?
- Does ASHA have guidelines for establishing fees for services?
- Can a school district deny speech-language pathology services to a student with a "mild" articulation disorder if the district decides that the disability does not "adversely affect educational performance"?
- What are some key elements of IDEA 2004 legislation and regulations as related to the provision of speech-language services in the schools?
- Are children who have commensurate IQ and language scores eligible for speech-language services?
- What are the roles of speech-language pathology assistants in school settings?
- What is outside of speech-language pathology assistants' scope of responsibilities?
- Why are school districts hiring "unqualified personnel" to fill the role of a speech- language pathologist? Is this allowable according to the law?
- What are the guidelines for best practice when working with multicultural populations in the school setting?
- What is ASHA's position on using the most recent version of a test?
- How often can a standardized test be re-administered to the same student?
- Can a child be eligible for speech-language services from a private practitioner and not eligible for services in schools?

APPENDIX C: ASHA's Ethics Q & A for School-Based Speech Language Pathology Practice

- Is it unethical for me to accept referrals for my part-time private practice for children who attend my school or district?
- My school system hires unqualified personnel as substitutes when I am ill or away from the job attending a professional meeting. Is this practice ethical?
- I sometimes have disagreements with parents about the amount of service their child needs. How can I avoid providing services that I feel are unwarranted or ethically wrong?
- What are my ethical responsibilities related to assessing and treating children from culturally diverse populations?
- What are my ethical responsibilities in mentoring clinical fellows and supervising student clinicians?
- What should I do if asked to "sign off" on Medicaid for speech-language pathologists I have not supervised?
- What are my responsibilities for supervising unqualified personnel?
- Does ASHA have a process for reporting ethical violations?
- Where can I find published articles and continuing education programs related to ethical problem solving?

APPENDIX D: Speech and Language Assessment Terms

The following assessment terms are important for comprehensive assessment in the field of speech-language pathology:

Artifact Analysis: A review of student work to provide information on use of skills in the educational setting. Artifacts may include homework, journal entries, essays, or other forms of student work. Items may be analyzed for specific information or to highlight strengths and weaknesses and provide a comparison to peers.

Expository Text: Nonfiction work intended to inform or explain. Some common formats of expository writing include description, persuasion, analysis, and comparison.

Elliptical Productions: Productions omit repeated information during a conversation. For example:

> Person 1: "What are you doing after school today?"
> Person 2: "Getting a snack." ("after school today" is omitted)

Language Productivity: Productivity includes overall length, length per unit, mean length of utterance (MLU), communication units (C-units), terminal units (T-units), syntactic complexity, elaboration, morphological adequacy, lexical diversity.

Language Sample Analysis: A process that consists of four parts: obtaining the student's language sample and subsequent transcription, analysis, and interpretation of the sample. Analysis includes factors such as mean length of utterance (MLU), number of different words (NDW), total number of words (TNW), mazes, utterances per turn, repairs, and revisions.

Macrostructural Elements: Includes higher order hierarchical organization that typically focuses on children's inclusion of story grammar components (e.g., description of situation, evolution of a problem, attempts to resolve, and consequences) and their complexity. Features such as character, setting, initiating events, number of story propositions and episodes, and informativeness are important. Norm-referenced and criterion-referenced tools are available.

Mean Length Utterance (MLU): The mean number of morphemes produced, which is calculated by dividing the total number of morphemes in a language sample by the number of utterances.

Microstructural Elements: Include embedded structures used within the narrative and features of construction, such as conjunctions, noun phrases, and dependent clauses, pronominal reference, cohesive devices, and tense appropriateness.

Narrative Text: A fictional or nonfictional story, in oral or written form, that describes a series of events. May be analyzed for micro- or macrostructural elements.

Definitions and Examples of T-units, C-units, Fragments, and Clauses (Nippold, 2005)

T-Unit: A T-unit contains one independent (main) clause and any dependent (subordinate) clauses or nonclausal structures that are attached to it or embedded within it (Hunt, 1970). For example, the utterance "Bill bought a new bicycle before he went to Europe" is one T-unit that contains an independent clause ("Bill bought a new bicycle") and a dependent clause ("before he went to Europe"). In contrast, the utterance "Bill went to France and then he went to Italy" consists of two T-units because it contains two independent clauses joined by the coordinating conjunction and. Whenever a coordinating conjunction (e.g., and, but, so) initiates an independent clause, that clause is considered to be a new T-unit.

C-Unit: A C-unit is identical to a T-unit but includes responses that lack an independent clause when answering a question (Loban, 1976). For example, the response yes to the question "Did Jack drive?" is one C-unit.

Fragment: A fragment is an utterance that lacks a main verb and/or a subject; therefore, it is not an independent clause. It does not answer a question. For example, the following utterances are fragments: "going down the road," "the other day," "2 weeks later."

Independent (Main) Clause: An independent clause contains a subject and a main verb and makes a complete statement. For example, the following are both independent clauses: "Mother rode her bicycle to work today," and "It started to rain late last night."

Dependent (Subordinate) Clauses: A dependent clause contains a subject and a main verb but does not make a complete statement. Therefore, it cannot stand alone. There are three main types of dependent clauses: relative, adverbial, and nominal (Crews, 1977. F & Greenbaum, 1973):

1. A **relative clause** (i.e., adjective clause) acts like an adjective and modifies the noun or pronoun that precedes it: for example, "The cat that was sleeping on the couch was content."
2. An **adverbial clause**, also called a subordinate clause, acts like an adverb and modifies a verb, adjective, or another adverb. It often describes a condition or cause and begins with a subordinate conjunction: for example, "Unless we can reach Los Angeles by eight o'clock, we'll miss the concert."
3. A **nominal clause** is a noun-like element that can serve as either the subject of a sentence (e.g., "Whatever she told you about the wedding was a great exaggeration") or its object (e.g., "I told her what she needed to hear"). Nominal clauses often begin with wh- words: for example, "I never know where I should park." "My desire to become a nurse is why I study so hard." "Checkmate occurs when your opponent's king cannot escape."

For additional information on assessment terms and techniques, please access the following resources:

Gillam, R. B., & Gillam, S. (2006). Making evidence-based decisions about child language intervention in schools. Language Speech and Hearing Services in Schools, 37, 304–315.

Gillam, R. B., & Johnston, J. R. (1992). Spoken and written language relationships in language/learning-impaired and normally achieving school-age children. Journal of Speech and Hearing Research, 35, 1303–1315.

Gillam, R. B., & Pearson, N. (2004). Test of Narrative Language. Austin, TX: Pro-Ed.

Hughes, D., McGillivray, L., & Schmidek, M. (1997). Guide to narrative language: Procedures for assessment. Eau Claire, WI: Thinking Publications.

Gordon-Brannan, M. & Hodson, B. (2000) Intelligibility/severity measurements of prekindergarten children's speech. American Journal of Speech-Language Pathology, 9, 141– 150.

Nippold, M., Hesketh, J., Duthie, J., and Mansfield, T. (2005). Conversational versus expository discourse: A study of syntactic development in children, adolescents, and adults. Journal of Speech Language Hearing Research, 48, 1048–1064.

Paul, R. (2001). Language disorders from infancy to adolescence: Assessment and intervention. (2nd ed.). St. Louis, MO: Mosby.

Smit, A. B., Hand, L., Freilinger, J. J., Bernthal, J. E., and Bird, A. (1990). The Iowa Articulation Norms project and its Nebraska replication. Journal of Speech and Hearing Disorders, 55, 779– 798.

Spaulding, T. J., Plante, E., and Farinella, K. A. (2006) Eligibility criteria for language impairment: Is the low end of normal always appropriate? Language, Speech, and Hearing Services in Schools, 37, 61–72.

APPENDIX E: Speech-Language Sample Screening Forms

Parental permission is not required for 45-day screenings. If a concern about a student is identified through screening procedures or review of records, the parents of the student shall be notified of the concern within 10 school days and informed of the PEA's procedures to follow up on the student's needs. These screening instruments are designed for the classroom teacher to administer. If results indicate a possible disability, the teacher will then follow the PEA's referral procedures.

Sample Communication Screening Checklist

Student's Name: **Date:**
DOB: **Age:** **School:**
Student's Counselor: **ID#:**
Homeroom Teacher: **Date Entered School:**

This checklist is to be completed for every student who is new to this school by the student's language arts teacher.

The student is an English language learner or uses a sociocultural dialect. ☐ Yes ☐ No

Answer each question below using the following codes:

F = Frequently O = Occasionally N = Not at all N.O. = Not Observed

☐ F ☐ 0 ☐ N ☐ N.O.	This student avoids talking in class.
☐ F ☐ 0 ☐ N ☐ N.O.	This student appears frustrated when trying to talk.
☐ F ☐ 0 ☐ N ☐ N.O.	This student avoids talking to peers/adults.
☐ F ☐ 0 ☐ N ☐ N.O.	This student seems concerned about his/her speech.
☐ F ☐ 0 ☐ N ☐ N.O.	This student withdraws from group activities.
☐ F ☐ 0 ☐ N ☐ N.O.	I feel uncomfortable when trying to communicate with this student.

This student is experiencing difficulties with: (check all that apply)

☐ Listening skills ☐ Concept work ☐ Following directions ☐ Oral reading

☐ Reading comprehension ☐ Other (Describe any items checked)

Observations about student's communication (include comments for any items checked):

☐ Voice Quality

☐ Stuttering

☐ Intelligibility

☐ Articulation

Return this screening form to (SLP contact information):

Sample Speech-Language Screening Checklist

Student's Name: **Date:**

Teacher: **Grade:**

Date/Results of Hearing Screening:

Communication Skills: Please compare the student's performance to that of his/her classmates. Please answer all questions.

☐ Yes ☐ No ☐ Sometimes	Do you have difficulty understanding this student?
☐ Yes ☐ No ☐ Sometimes	Does the student have difficulty expressing wants and needs?
☐ Yes ☐ No ☐ Sometimes	Does the student avoid speaking in class?
☐ Yes ☐ No ☐ Sometimes	Does the student have difficulty understanding curriculum vocabulary and/or concepts?
☐ Yes ☐ No ☐ Sometimes	Does the student require excessive "wait time" to either comprehend or respond?
☐ Yes ☐ No ☐ Sometimes	Does the student have difficulty expressing ideas in an organized and coherent manner?
☐ Yes ☐ No ☐ Sometimes	Does the student exhibit noticeable hesitations, part-word or word repetitions, sound blockages, or excess facial or neck movement?
☐ Yes ☐ No ☐ Sometimes	Does the student's voice sound unusual (e.g., hoarse, nasal, high-pitched)?
☐ Yes ☐ No ☐ Sometimes	Does the student's speech rate/volume interfere with your ability to understand him/her?
☐ Yes ☐ No ☐ Sometimes	Does the student mispronounce sounds or words? Please provide examples.
☐ Yes ☐ No ☐ Sometimes	Have the parents expressed concerns regarding communication?
☐ Yes ☐ No ☐ Sometimes	Do you feel the student's speech and language skills negatively affect his/her academic performance?
☐ Yes ☐ No ☐ Sometimes	Does the student appear to be upset or have concerns about communicating?
☐ Yes ☐ No ☐ Sometimes	Does the student have difficulty following directions?
☐ Yes ☐ No ☐ Sometimes	Does the student have difficulty using complete sentences or correct grammar?

Please describe any items marked "Yes" on the back of this form.

Please return this form to: By:

APPENDIX F: Comprehensive Communication Assessment System

The following comprehensive assessment tools are used to summarize and describe a student's speech-language performance, communicate with team members on eligibility and IEP decisions, and assure consistency between speech-language pathologists/technicians across Arizona. After review of all assessment data, the team should complete the appropriate assessment summary forms. Data from four assessment sources should be included in a comprehensive assessment: (1) academic activities, (2) academic tests and measures, (3) SLP probes, and (4) SLP tests and measures. For each column, circle the box that best represents the student's documented performance. The resulting descriptors will provide an overview of the student's communication skills. A visual pattern of strengths and weaknesses will be apparent once all areas of assessment are documented on the summary sheet.

The evaluation team will consider the comprehensive assessment data, in conjunction with criteria in Arizona regulations for eligibility for a student with a speech-language impairment, to determine eligibility.

The determination of eligibility for special education is based on an evaluation pursuant to the IDEA '04, A.R.S. §15-766, and the following requirements:

The student has a communication disorder such as stuttering, impaired articulation, severe disorders of syntax, semantics or vocabulary, functional language skills, or voice impairment to the extent that it calls attention to itself and interferes with communication, causes the child to be maladjusted, or impacts educational performance.

An evaluation by a certified speech/language pathologist/technician has been conducted.

The student was evaluated in all areas related to the suspected disability. However, if the impairment appears to be limited to articulation, voice, or fluency problems the evaluation may be limited to the following:

- An audiometric screening within the past calendar year
- A review of academic history and classroom functions
- An assessment of the student's functional communication skills

Eligibility team members should note that eligibility is based on:

1. the presence of a speech-language impairment
2. an adverse educational impact
3. the need for special education (specialized instruction) and related services (services necessary for the student to benefit from special education)

The documentation of a level of impact does not guarantee eligibility. Instead, the assessment summary forms describe speech-language assessment findings in consistent terms across all areas of a comprehensive assessment.

Levels of impact must not be used to predict or specify a level of service. The services provided in the IEP are determined after the IEP team considers the present levels of academic achievement and functional performance and the student's goals. Service recommendations are not based on the levels of impact, and IEP teams should not add or average levels of impact.

See the IEP section of these guidelines for further information on IEP development and decision making.

Speech Production Assessment

An **articulation/phonological impairment** is characterized by an inability to use speech sounds that are appropriate for a person's age and linguistic dialect. Such errors in sound production may interfere with intelligibility, social communication, and/or academic and vocational achievement.

A student cannot be considered to have an articulation/phonological impairment based on characteristics that are consistent with cultural and/or linguistic diversity. Students who use American Sign Language or other alternate forms of communication (e.g., augmentative/alternative communication) should be assessed in their primary mode of communication.

Children who evidence problems with hearing, structure, and function of the speech mechanism (e.g., cleft palate) or motor speech difficulty (e.g., apraxia) should be viewed differently than those with more common developmental speech sound disorders. The presence of such etiological variables would suggest a high priority for intervention. After intervention, when the child has reached a plateau in his or her motor skills and has mastered compensatory strategies, the child may no longer be eligible for services.

The Speech Production Assessment Summary represents research in the areas of articulation and phonology. The tool provides an opportunity to review data from SLP probes and measures, as well as observation and data from academic settings. The SLP/SLT should lead the team through reviewing all data and circle the cell that describes the student's performance for each of the factors listed. This summary of the assessment data may also be used to document the educational impact and educational needs of the student.

Note: The presence of articulation/phonological impairment does not guarantee the student's eligibility for special education. Arizona and federal criteria, including educational impact caused by the impairment and need for specially designed instruction, must be met for a student to be eligible for special education and related services.

Articulation/Phonological Considerations

The following guidelines may be helpful in determining the areas of assessment depending on the age of the student:

Ages 3–5: Intelligibility, phonological process usage, and stimulability are usually more important than social and vocational considerations.

Ages 6–9: Speech sound production norms and stimulability are the typical focus. Social and academic variables should be given stronger consideration.

Ages 9 and up: Stimulability and social and academic/vocational considerations are of high importance for this age group.

Comprehensive Assessment Data Sources

Evaluation data should be gathered from four areas for comprehensive assessment: (1) academic activities, (2) academic tests and measures, (3) SLP/SLT probes, and (4) SLP/SLT tests and measures. IDEA regulations require multiple sources of information be used to determine eligibility. Teacher, child, and parent reports, interviews, norm-referenced tests, or checklists are not sufficient evidence by themselves and must be supported with additional data.

Academic Activities, Tests, and Measures: Data sources include classwork, homework, and observations of oral, written, and pragmatic language in school settings. Intelligibility should be assessed in multiple settings by at least one familiar listener. Data from achievement tests, state assessments, benchmark tests, and pre-referral intervention data should also be reviewed. Any speech production errors evident in written work samples or artifacts should be noted.

Determining Intelligibility: Teachers play an important role in documenting intelligibility in the educational setting. "Children above the age of 4 with intelligibility percentages below 66 percent may be "at risk." "The children farther along the continuum toward unintelligible speech would be of greatest concern not only for communication success, but also potentially for problems in developing literacy skills" (Gordon-Brannan & Hodson, 2000). Additionally, research shows that teachers' academic, social, and behavioral expectations of students who are moderately to severely unintelligible are statistically different from normally intelligible students (Overby, Carrell, & Bernthal, 2007).

Ratings of intelligibility should be made using connected speech. For young students who are highly unintelligible, Gordon-Brannan and Hodson (2000) suggest an alternative measure of intelligibility using imitated sentences. Some advantages of the imitated sentence measure are: (a) suprasegmental features and some syntactic/morphological and contextual cues are available, (b) it takes less time to administer and score than the continuous-speech procedure, and (c) the child's intended utterance is known by the examiner. Intelligibility percentages for imitated sentences tended to be somewhat lower than for continuous speech in which the context was known.

Norm-Referenced Tests and Measurements: Data sources include speech sound production or phonological processes data, stimulability, and percentage of consonants correct. Oral motor examination should be completed to ensure that an underlying physical structure or motor issue is not interfering with speech production. Data from pre-referral interventions and dynamic assessment activities should be included in this section.

Speech Sound (Segmental) Production: This factor should be rated if phonological processes are not present. Determine developmental appropriateness of sound errors by using the Iowa-Nebraska Articulation Norms (Smit, Hand, Freilinger, Bernthal, and Bird, 1990). These norms were originally published in a Journal of Speech and Hearing Disorders article and reflect the most recent and comprehensive normative study that has been reported. While results are comparable to those of Templin (1957), the Iowa-Nebraska norms represent a larger normative sample.

Noted exceptions: For students producing **lateralized sibilants**, using norms to determine if therapy is warranted is not best practice because self-correction does not usually occur with lateralization. There is literature to support not using developmental norms to determine when to provide therapy for lateral /s/. The literature also supports the provision of therapy for developmental errors /r/ and /s/ at or around age eight. There is no support for the idea that error production becomes more resistant to correction and should be treated at a younger age.

Phonological Processes: When multiple sounds are in error, phonological processes provide a way to examine patterns of sound errors. Phonological processes go beyond individual phonemes

to changes that occur regularly for entire classes or groups of sounds. Processes can be divided into three categories:

1. **Whole word/syllable processes** change the syllable structure of the word by either taking away a sound(s), adding a sound(s), moving a sound, or a combination of these.
2. **Substitution processes** substitute one sound for another, changing something in the manner, place, or voicing of the sound.
3. **Assimilation processes** are also known as harmony processes as one sound changes to become more like (or exactly like) another sound in the word.

Phonological processes simplify the production of speech and can be part of normal development. When processes continue beyond a developmental stage, they may impact intelligibility. Some processes have been shown to have a greater relative effect on intelligibility than others. For example, research shows that final consonant deletion and stopping have a greater impact on intelligibility than velar fronting.

Processes like unstressed syllable deletion, reduplication, and assimilation often disappear before age three, while cluster simplification, gliding of liquids, vocalization, and stopping tend to persist the longest, up to age five and beyond. Only processes that are not developmental and occur in 40 percent or more opportunities should be noted on the assessment summary form. However, when there is evidence of at least one process that meets the 40 percent criterion, it is important to document any additional processes used more than 15 percent.

Free online training modules on phonological processes are available.

Whole Word Syllable Processes

Phonological Process	Description	Example
Consonant Cluster	a consonant cluster is simplified, changed, or eliminated	'star' becomes 'tar' or 'dar' 'must' becomes 'mu'
Simplification (reduction) Final Consonant Deletion	the final consonant of a word is deleted	'cup' becomes 'cu'
Reduplication	a syllable is repeated often making CVCV word	'wagon' becomes 'wawa'
Unstressed (weak) Syllable Deletion	an unstressed syllable of a word is deleted	'banana' becomes 'nana'
Coalescence	features of two adjacent sounds are combined into one sound	'crying' becomes 'bying'
Epenthesis	a segment is added	'plane' becomes 'palane'
Metathesis	two sounds or segments are transposed	'cinnamon' becomes 'cimmanin'

Substitution Processes

Phonological Process	Description	Example
Affrication	a fricative becomes an affricate	'sheep' becomes 'cheep'
Backing	a sound is replaced by a sound made further back in the mouth	'too' becomes 'koo'
Deaffrication	an affricate becomes a fricative	'chair' becomes 'shair'
Denasalization	a nasal sound becomes a stop	'no' becomes 'do'
Devoicing of Final Consonants	a voiced final sound is devoiced	'bad' becomes 'bat'
Gliding of Liquids	prevocalic liquids become glides	'wagon' becomes 'wa?on'
Glottal Replacement	a final or intervocalic sound is replaced by a glottal stop	'light' becomes 'wight'
Prevocalic Voicing	a prevocalic voiceless sound is voiced	'too' becomes 'doo'
Stopping	a fricative or affricate becomes a stop	'sheep' becomes 'teep'
Velar Fronting	a sound is replaced by a sound made further forward in mouth	'cup' becomes 'tup'
Vocalization	a liquid or nasal becomes a vowel	'over' becomes 'ova'

Assimilation Processes

Phonological Process	Description	Example
Labial Assimilation	a nonlabial consonant becomes a labial in the presence of a labial	'bad' becomes 'bab'
Nasal Assimilation	a nonnasal consonant becomes a nasal in the presence of a nasal	'can' becomes 'nan'
Velar Assimilation	a nonvelar consonant becomes a velar in the presence of a velar	'dog' becomes 'gog'

Stimulability: Stimulability is an important factor when determining the level of impairment and when documenting the need for specially designed instruction. Data suggest that lack of stimulability for a misarticulated sound is a good indicator of an appropriate target for therapy, since ability to produce a sound is essential before children begin to acquire a sound or otherwise generalize from one context to another.

Students who are stimulable would not need specially designed instruction to produce sounds correctly and may benefit from a home practice program or follow-up by classroom teachers. Determine stimulability using the Miccio Probe. Stimulability is determined for all error sounds, regardless of age appropriateness. Use of the Miccio Probe is best described in Miccio's article in the American Journal of Speech-Language Pathology. The following is a summary of the process:

1. Only sounds absent from the inventory are tested. The student is asked to imitate these specific consonants in isolation or in nonsense syllables. Those sounds imitated correctly some of the time (at least 30 percent of possible opportunities) are presumed to be stimulable.
2. Provide 10 opportunities to produce a sound: in isolation and in three word positions in three vowel contexts, /i/, /u/, and /a/. The corner vowel contexts: a high (or close) unround front vowel, a high round back vowel, and a low unround vowel usually reveal any consonant-vowel dependencies.
3. If multiple sounds are absent from the inventory, administering only one vowel context during the initial assessment may shorten the probe.

Percentage of Consonants Correct: Percentage of consonants correct (PCC) yields severity ratings on a four-level scale and has been accepted as a valid index of severity in the field of speech-language pathology. A study by Johnson, Weston, and Bain (2004) found that an imitative sentence procedure provided PCC scores that compared favorably to those derived from spontaneous speech, and the imitative procedure was significantly faster than sampling spontaneous speech. These results indicate that either imitative or spontaneous speech samples may be used when calculating PCC. The abbreviated procedures below are based on the recommendations of Johnson, Weston, and Bain (2004) and Shriberg and Kwiatkowski (1982):

1. Obtain a recorded speech sample.
2. Imitative samples of 36 sentences with appropriate mean length utterance (MLU) for the student's age should be used. Present sentences using a conversational tone without exaggerated prosodic cues (Weston and Bain 2004).
3. Spontaneous samples should include 90 different words—usually a sample of around 225 total words is sufficient. If the child is so unintelligible that it is impossible to identify this number of different words, then a single word assessment tool can be used to gather productions for analysis.
4. Only consonants are scored, not vowels (i.e., only the consonant /r/ is scored).
5. Score only the first production of a consonant. If a syllable is repeated (e.g., ba- balloon), score only the first production of /b/).
6. Do not score consonants if a word is unintelligible or only partially intelligible.
7. Errors include substitutions, deletions, distortions, and additions. Voicing errors are only scored for consonants in the initial position of words.

8. If /ng/ is replaced with /n/ at the end of a word, do not score it as an error. Likewise, minor sound changes due to informal speech and/or selection of sounds in unstressed syllables are not scored as errors (e.g., /fider/ for “feed her,” /dono/ for “don’t know”).
9. Dialectal variations are not scored as errors.
10. To determine the PCC value, use the following formula:

Number of Correct Consonants ÷ Total Number of Target Consonants X 100 = PCC

References:

Crowe, K., & McLeod, S. (2020). Children's English consonant acquisition in the United States: A review. American Journal of Speech-Language Pathology, 29(4), 2155–2169.

Gordon-Brannan, M., & Hodson, B. W. (2000). Intelligibility/severity measurements of prekindergarten children’s speech. American Journal of Speech-Language Pathology, 9, 141– 150.

Klein, E., & Flint, C. (2006, July), Measurement of intelligibility in disordered speech. Language, Speech, and Hearing Services in Schools, 37, 191–199.

Overby, M., Carrell, T., Bernthal, J. (2007, October). Teachers’ perceptions of students with speech sound disorders: A quantitative and qualitative analysis. Language, Speech, and Hearing Services in Schools, 38, 327–341.

Iowa-Nebraska Articulation Norms

Listed below are the recommended ages of acquisition for phonemes and clusters, based generally on the age at which 90 percent of the children correctly produced the sound.

Phoneme	Age of Acquisition (Females)	Age of Acquisition (Males)
/m/	3	3
/n/	3.6	3
/ŋ/	7	7
/h-/	3	3
/w-/	3	3
/j-/	4	5
/p/	3	3
/b/	3	3
/t/	4	3.6
/d/	3	3.6
/k/	3.6	3.6
/g/	3.6	4
/f-/	3.6	3.6
/-f/	5.6	5.6
/v/	5.6	5.6
/ɑ/	6	8
/Ɔ̃/	4.6	7
/s/	7	7
/z/	7	7
/ʃ/	6	7
/tʃ/	6	7
/dʒ/	6	7
/l-/	5	6
/-l/	6	7
/r-	8	8
/ɚ-/	8	8

Word-Initial Clusters	Age of Acquisition (Females)	Age of Acquisition (Males)
/tw kw/	4	5.6
/sp st sk/	7	7
/sm sn/	7	7
/sw/	7	7
/sl/	7	7
/pl bl kl gl fl/	5.6	6
/pr br tr dr kr gr fr/	8	8
/qr/	9	9
/skw/	7	7
/spl/	7	7
/spr str skr/	9	9

Note regarding phoneme positions:

/m/ refers to prevocalic and postvocalic positions.

/h-/ refers to prevocalic positions.

/-f/ refers to postvocalic positions.

Miccio Stimulability Probe

Name:

Transcriber:

Date:

Prompt: “Look at me, listen, and say what I say.”

Sound	Isolation	_i	i_i	i_	_a	a_a	a_	_u	u_u	u_	% Correct
p											
b											
t											
d											
k											
g											
q											
ð											
f											
v											
s											
z											
ʃ											
ʒ											
tʃ											
dʒ											
m											
n											
ŋ											
w											
j											
h											
l											
r											

Percentage Consonants Correct (PCC)

Child Name: Date of Birth:

PCC Scoring Date: Speech-Language Pathologist:

Percentage Consonants Correct (PCC)

Consonant Class/Sound	Initial	Medial	Final	Consonants Correct	Total Consonants
Nasal /m/					
Nasal /n/					
Nasal / ŋ/					
Glide /w/					
Glide /j/					
Stop /p/					
Stop /b/					
Stop /t/					
Stop /d/					
Stop /k/					
Stop /g/					
Fricative /f/					
Fricative /v/					
Fricative /ʃ/					
Fricative /ʒ/					
Fricative /s/					
Fricative /z/					
Fricative /h/					
Fricative /q/					
Fricative /ʱ/					
Fricative /ɵ/					
Affricate /ʧ/					
Affricate /dʒ/					
Liquid /l/					
Liquid /r/					

Number of Correct Consonants ÷ Total Number of Consonants X 100 = PCC

Speech Production Assessment Summary

Name: Date:

Review all assessment data, including teacher and parent input, prior to completing this form. For each assessment area column, circle the item that best represents the student's performance.

Academic Activities, Tests, and Measures

- Data sources include classwork and observations of oral and written language in school settings
- Intelligibility in connected speech across settings

SLP Probes, Tests and Measures

- Speech Sound Production
  1. Speech sound segmental production (Use Iowa-Nebraska Norms)
  2. Phonological processes (Check only those not developmentally appropriate that occur in 40 percent or more opportunities)
- Stimulability (Miccio Probe)
- Percentage of Consonants Correct (PCC) Imitative or spontaneous

Impact	Evidence	Intelligibility	Norms	Processes	Stimulability	% Correct
No Apparent Impact	Performs similarly to peers in most areas	Age 3: >75% Age 4: >85% Age 5+: >90%	Meets norms for acquisition of phonemes and clusters	No significant error processes	Error sounds are 90–100% stimulable	PCC value more than 95%
Minimal Impact	Evidence of struggles with one or more areas when compared to peers	Age 3: 65–75% Age 4: 75–85% Age 5+: 81–90%	1–2 sounds do not meet norms for acquisition of phonemes and clusters	1 or more occur: Gliding CR with /s/ Vowelization Post-vocalic /r/ or /l/	Error sounds are 60–90% stimulable	PCC value of 85–95%
Moderate Impact	Evidence of struggles in most areas when compared to peers	Age 3: 50–65% Age 4: 65–75% Age 5 and up: 70–80%	3–4 sounds do not meet norms for acquisition of phonemes and clusters	1 or more occur: WSD DEP initial CR /l/, /r/, /w/ Velar fronting	Error sounds are 50-60% stimulable	PCC value of 50–84%
Substantial Impact	Evidence of very limited ability in most areas	Age 3: <50%	5 or more sounds do not meet norms for acquisition of phonemes and clusters	1 or more occur: ICD FCD Stopping DEP final	Error sounds are 0–50% stimulable	PCC value less than 50%

Phonological Process Abbreviations:

CR – cluster reduction FR – fronting DEP – depalitization of singletons

WSD – weak syllable deletion Gliding – gliding of liquids FCD – final consonant deletion

Language Assessment

A **language impairment** is defined as the inadequate or inappropriate acquisition, comprehension, or expression of language. Students who have limited English proficiency (LEP) or those students who are not speakers of Standard American English because of sociocultural dialects are not automatically considered to be students with speech-language impairments.

The presence of a language impairment does not guarantee the child's eligibility for special education.

Comprehensive Assessment Data Sources

Evaluation data should be gathered from four areas for comprehensive assessment: (1) academic activities, (2) academic tests and measures, (3) SLP probes, and (4) SLP tests and measures. IDEA regulations require that multiple sources of information be used to determine eligibility. Teacher, child, and parent reports, interviews, norm-referenced tests, or checklists are not sufficient evidence by themselves and must be supported with additional data.

When completing a summary, data should be based on the child's performance in his or her preferred mode of communication (e.g., American Sign Language, augmentative/alternative communication). This should be documented in the evaluation report and IEP. On occasion, it may be valuable to document performance without the preferred mode of communication to contrast the difference in the child's skills between the preferred mode of communication and standard oral communication.

Academic Activities: Data sources include classwork, homework, and observations of oral, written, and pragmatic language use in school settings. Samples of student work (artifacts) provide meaningful opportunities to evaluate language ability in the context of the educational setting. Observations and evidence of the student's metacognitive, metalinguistic, and meta-pragmatic skills should be included as part of these data. In addition to providing valuable insight into the student's abilities, these data also provide support for determination of educational impact, which is required by IDEA.

Academic Tests and Measurements: Data sources include norm-referenced achievement tests, state assessments, benchmark tests, and pre-referral intervention data.

Speech-Language Pathology Probes: Multiple data sources should be used to complete this portion of a comprehensive assessment. Data should include oral language samples; narrative samples; probes of written language; interviews with students, parents, and teachers; dynamic assessment findings; and case history information. Data from pre-referral interventions may also be included in this section. Oral and written language and/or discourse samples and probes should examine pragmatic, semantic, syntactic, morphological, and phonological skills.

Additionally, data on metalinguistic, metacognitive, and metapragmatic skills should be gathered through interviews and systematic observations.

Norm-Referenced Tests and Measurements: Data sources include multiple norm-referenced tests with appropriate sensitivity and specificity (Spaulding et al., 2006). Only composite scores may be considered for use on the summary form. Subtests and partial test administrations are not valid for comparison to peers or for eligibility decision making.

Norm-referenced tests must be administered in a standardized manner and the norming population must match that of the student being evaluated. IDEA requires "assessments and other evaluation materials used to assess a child . . . are administered in accordance with any instructions provided by the producer of the assessment. Any variation from standard administration procedures (e.g., repetition, cues, additional time, etc.) invalidates scoring and

results in a nonstandard administration. The findings of strengths and weaknesses can be described, but no score should be reported.

Language Assessment Summary

Name: **Date:**

Review all assessment data, including teacher and parent input, prior to completing this form. For each assessment area column, circle the item that best represents the student's performance.

	Academic Activities	Academic Tests and Measurements	Speech-Language Pathology Probes
Educational Impact	Data sources include classwork, homework, observations of oral, written, and pragmatic language in school settings	Data sources include achievement tests, state assessments, benchmark tests, and pre-referral intervention data	Data sources include language samples, interviews, case history, and dynamic assessment data
No Apparent Impact	Performs similarly to peers in most areas	Performs similarly to peers in most areas	May indicate differences from Standard American English Demonstrates improvements during dynamic assessment
Minimal Impact	Evidence of struggle with one or more areas when compared to peers Evidence of occasional difficulty with "meta-" skills	Evidence of struggle with one or more areas when compared to peers	May indicate differences from Standard American English Demonstrates improvements during dynamic assessment Occasional difficulty with pragmatic, semantic, or syntactic-morphological skills
Moderate Impact	Evidence of struggle in most areas when compared to peers Evidence of difficulty with "meta-" skills	Evidence of struggle in most areas when compared to peers	Demonstrates limited improvement during dynamic assessment Frequent difficulty with pragmatic, semantic, or syntactic-morphological skills
Substantial Impact	Evidence of very limited ability in most areas Evidence limited or absence of "meta-" skills	Evidence of very limited ability in most areas	Demonstrates very limited improvement during dynamic assessment Extensive difficulty with pragmatic, semantic, or syntactic-morphological skills

Fluency Assessment

A **fluency disorder** is primarily characterized by repetitions (sounds, syllables, part words, whole words, phrases), pauses, and prolongations that differ in number and severity from those of normally fluent individuals. The onset usually occurs during the time that language skills are developing, and onset is generally gradual in nature. Secondary characteristics are frequently evident, and these vary in type and severity from individual to individual. The dysfluencies may interfere with intelligibility, social communication, and academic and vocational achievement.

Comprehensive Assessment Data Sources

Assessment data should be gathered from four areas for comprehensive assessment: (1) academic activities, (2) academic tests and measures, (3) SLP probes, and (4) SLP tests and measures. IDEA regulations require that multiple sources of information be used to determine eligibility. Teacher, child, and parent reports, interviews, norm-referenced tests, or checklists are not sufficient evidence by themselves and must be supported with additional data.

Academic Activities, Tests, and Measures: Data sources include classwork, homework, and observations in school settings. Data from achievement tests, benchmark tests, and pre-referral intervention data should also be reviewed. An observation of student's speech and language during oral language activities in the classroom/school environment should provide information on frequency and type of dysfluencies, as well as any nonvocal behaviors and avoidance.

In addition to providing valuable insight into the student's abilities, these data also provide support for determination of educational impact, which is required by IDEA.

Norm-Referenced Tests and Measurements: Data should include frequency of dysfluency, description of dysfluency, associated nonvocal behaviors, and avoidance. Data from pre-referral interventions and dynamic assessment activities should also be included in this section. The speech-language pathologist should complete the Fluency Assessment Summary and provide a description of the student's communication skills including information related to each of the factors listed in the assessment summary form.

The SLP/SLT should also gather data on:

- **background information:** a history of the development of the student's stuttering, family history of stuttering, etc.
- **communication abilities:** a report of the student's skills in five areas of communication—fluency, articulation, voice, language, and hearing.
- **oral-peripheral examination:** a description of any atypical structures and the functional abilities of the oral mechanism.

When considering a preschool-aged child who is exhibiting dysfluent behavior, research indicates that the chances of success are greater the sooner a problem and its contributing factors are identified. When a preschool-aged child exhibits the following chronic nonfluent behaviors, it is likely the child will benefit from early intervention: the insertion of the schwa, uneven stress and rhythm, difficulty initiating and sustaining airflow, body tension and struggle behavior during speech, and the presence of significant predictors such as family history.

For preschool children, the consideration of the adverse effect should be based on the effect of the fluency impairment on the child's developmental skills in play, adaptive/self-help, communication, social-emotional, cognitive, and sensorimotor.

Frequency of Dysfluency: Describes the number of dysfluencies as number per minute or as a percentage. This is calculated using a sample of spoken language.

Description of Dysfluency: Describes the duration of pauses (from less than one second to more than three seconds) and the number of reiterations per repetition (from less than four reiterations per repetition to six or more reiterations per repetition). This is calculated using a sample of spoken language.

Associated Nonvocal Behaviors: Describes the presence of facial grimaces; visible tension of the head, neck, jaw, and/or shoulders; audible tension, as noted in uneven stress, pitch changes, increased rate, or tension during inhalation or exhalation noted by the examiner during assessment and in various educational settings.

Avoidance: Describes a student's behavior when the student is required to speak. Examples include changing words or topics, refusing to participate, social withdrawal, etc.

Name: **Date:**

Review all assessment data, including teacher and parent input, prior to completing this form. For each assessment area column, circle the item that best represents the student's performance.

Academic Activities, Tests, and Measures **SLP Probes, Tests, and Measures**

	Data sources include classwork, homework, observations of oral, written, pragmatic language in school settings	Frequency of dysfluency	Description of dysfluency	Associated nonvocal behaviors	Avoidance
No Apparent Impact	Performs similarly to peers in most areas	Less than 4% vocal dysfluencies per speaking minute **or** < 3 dysfluencies per minute	Primarily whole multisyllabic word repetitions Occasional whole-word interjections and phrase/sentence revisions Less than 1 second pauses **or** less than 4 reiterations	No associated behaviors	Does not avoid speaking situations
Minimal Impact	Evidence of struggle with one or more areas when compared to peers	4% vocal dysfluencies per speaking minute **or** 3–5 dysfluencies per minute	Transitory dysfluencies in specific speaking situations including repetitions, prolongations, blocks, hesitations, or interjections and vocal tension 1-second pauses **or** 4 reiterations	One associated behavior that is noticeable but not distracting	Usually does not avoid speaking situations
Moderate Impact	Evidence of struggle in most areas when compared to peers	6–10% vocal dysfluencies per speaking minute **or** 6–10 dysfluencies per minute	Frequent dysfluencies in many speaking situations including repetitions, prolongations, blocks, hesitations, or interjections and vocal tension	One associated behavior that is noticeable and distracting	Does avoid some speaking situations

	Data sources include classwork, homework, observations of oral, written, pragmatic language in school settings	Frequency of dysfluency	Description of dysfluency	Associated nonvocal behaviors	Avoidance
			2-second pauses **or** 5 reiterations		
Substantial Impact	Evidence of very limited ability in most areas	10% or more vocal dysfluencies per minute **or** 10 or more dysfluencies per minute	Habitual dysfluencies in a majority of speaking situations, including repetitions, prolongations, blocks, hesitations, or interjections and vocal tension 3 or more second pauses **or** 6 or more reiterations	Two or more associated behaviors that are noticeable and distracting	Generally avoids speaking situations

Voice impairment is defined as "a pitch, loudness, or quality condition that calls attention to itself rather than to what the speaker is saying." Before a child may be found eligible for services for voice impairment, the child should receive a medical examination from an otolaryngologist (i.e., ear, nose, and throat physician), clearing the child for intervention. This is important to ensure the source of the voice impairment is not an organic problem for which therapy is contraindicated. See the Voice Referral Form in Appendix F.

Comprehensive Assessment Data Sources

Assessment data should be gathered from four areas for comprehensive assessment: academic activities, academic tests and measures, SLP probes, and SLP test and measures. IDEA regulations require that multiple sources of information be used to determine eligibility.

Teacher, child, and parent reports, interviews, norm-referenced tests, or checklists are not sufficient evidence by themselves and must be supported with additional data.

Academic Activities, Tests, and Measures: Data sources include classwork, homework, and observations in school settings. Data from achievement tests, benchmark tests, and pre-referral intervention data should also be reviewed. An observation of the student's speech and language during oral language activities in the classroom/school environment should provide information on vocal quality and appropriateness as compared to that of peers. In addition to providing valuable insight into the student's abilities, these data also document how the SLI adversely affects performance in the educational setting and how progress in the general curriculum is affected, which is required by IDEA regulations.

Norm-Referenced Tests and Measurements: Data should include voice quality, resonance, loudness, and pitch. Data from pre-referral interventions and dynamic assessment activities should also be included in this section. The speech-language pathologist should complete the Voice Assessment Summary and provide a description of the student's communication skills including information on each of the factors listed in the assessment summary form.

A comprehensive voice examination should include information obtained from both subjective measures (e.g., perceptual ratings and clinical impressions based on observations and analysis of speech samples) and objective measures (e.g., standardized tests or instrument evaluations). Observations should take place in situations calling for both low and high vocal demand:

- **low vocal demand:** utterances produced in a relatively quiet environment or short responses that do not require talking over a prolonged period of time.
- **high vocal demand:** talking in a noisy environment (e.g., in the cafeteria) for a prolonged period of time (e.g., oral presentation or reading aloud) or controlling the voice over a wide pitch range (e.g., singing).

Voice Impairment Terminology

Abusive Vocal Behaviors: activities such as frequent "throat clearing" or shouting (e.g., cheerleading).

Breathing Pattern: the general contributions of the thoracic, clavicular, and abdominal areas involved in breathing during conversational speech. Look for reliance upon one pattern to the exclusion of the others.

Glottal Attack: the relative (soft vs. hard) onset of vocal fold activity.

Loudness Level: the estimated level of the student's speech during normal conversation in a quiet environment. Persistent whispering or shouting would be positive indications.

Maximum Phonation Time: averaged over three different trials, the maximum amount of time (in seconds) that the student can continuously sustain /a/ (or /i/) on one exhalation.

Muscle Tension: the amount of tension visible in the student's face, neck, and chest areas during normal conversation. Abnormal tension is suggested by a stiff posture and/or accompanying strain.

Nasal Resonance: the amount of perceived resonance associated with the production of nasal consonants. An inappropriate degree of hypo- or hypernasality perceived during conversation would be a positive indication. Note: mixed nasal resonance (i.e., both hypo- and hypernasal resonance perceived within the same speaker) may occur.

Oral Resonance: the perceived amount of resonance associated with oral consonants and vowels. Indications include speaking with limited oral openings and reduced intelligibility.

Phonation Breaks: the inappropriate cessation of voicing during speech. A positive indication would be an unintentional and relatively brief period of silence during a normally voiced consonant or vowel.

Pitch: consideration as to whether the vocal pitch is too high, too low, or monotonic for a student's height/weight, age, and gender.

Pitch Breaks: the cessation of a continuous and appropriate pitch level during speech.

Quality: the overall quality of the student's conversational speech including hoarseness, breathiness, and/or harshness.

s/z ratio: the ratio of the maximum sustained production of /s:/ (in seconds) relative to /z:/ (in seconds). Two trials with the longer production of each sound used to compute the ratio. A ratio greater than 1.4 is an indication of possible laryngeal inefficiency for speech. Report data to the nearest single decimal place.

Voice Assessment Summary

Name: **Date:**

Review all assessment data, including teacher and parent input, prior to completing this form. For each assessment area column, circle the item that best represents the student's performance. When a valid comparison to a normative sample cannot be made or a student has significant impairments, consider completing the Functional Communication Assessment Summary form, which follows.

SLP Probes, Tests, and Measures

	Academic Activities, Tests, and Measures	Voice Quality	Resonance	Loudness	Pitch
	Data sources include classwork, homework, observations of oral, written, pragmatic language in school settings	Hoarse, breathy, no voice	Hypernasal, hyponasal, or mixed hyper-/hyponasal	Judged for appropriateness and variability	Appropriateness for age and gender, and for appropriate variability
No Apparent Impact	Performs similarly to peers in most areas	Normal voice quality	Normal resonance	Normal loudness	Normal pitch
Minimal Impact	Evidence of struggle with one or more areas when compared to peers	Inconsistent problems; noticeable to the trained listener	Inconsistent problems; noticeable to the trained listener	Inconsistent problems; noticeable to the trained listener	Inconsistent problems; noticeable to the trained listener
Moderate Impact	Evidence of struggle in most areas when compared to peers	Consistent problems in conversational speech; noticeable to all listeners	Consistent problems; inappropriate for age, gender, or culture; noticeable to all listeners	Consistent problems; inappropriate for age, gender, or culture; noticeable to all listeners	Consistent problems; inappropriate for age, gender, or culture; noticeable to all listeners

	Academic Activities, Tests, and Measures	Voice Quality	Resonance	Loudness	Pitch
Substantial Impact	Evidence of very limited ability in most areas	Persistent problem; noticeable at all times	Persistent problem; always inappropriate for age, gender, or culture; noticeable at all times	Persistent problem; always inappropriate for age, gender, or culture; noticeable at all times	Persistent problem; always inappropriate for age, gender, or culture; noticeable at all times

Functional Communication Assessment

Functional communication skills are "forms of behavior that express needs, wants, feelings, and preferences that others can understand." When individuals learn functional communication skills, they can express themselves without resorting to problem behavior or experiencing communication breakdown. Functional communication includes spoken and written communication, as well as gestures and pointing, and other forms of communication.

This Functional Communication Assessment Summary, which follows, may be used to document functional communication skills of any student in the education setting and may be helpful when examining the educational impact of a suspected communication impairment.

Functional Communication Categories:

Communicative Interaction: communication evidenced by initiation, topic maintenance, turn-taking, opening/closing conversations.

Communicative Intention: communication evidenced by requesting objects/actions, commenting on objects/actions, etc.

Communicative Methods: communication evidenced by use of one or more modes of communication (e.g., verbal, manual sign, AT or AAC system, gestures, pointing).

Comprehension of Language: communication evidenced by appropriate actions or communicative responses indicating comprehension of what others say, sign, or show.

Effect on Educational Performance: student demonstrates communication skills adequate for participation in current educational setting.

Data collected from known and novel communication partners in a variety of settings should be used when examining functional communication. Data should reflect interactions with persons other than the SLP.

Functional Communication Assessment Summary

Name: Date:

This form may be used to document functional communication skills in the education setting and may be helpful when evaluating students when a valid comparison to a normative sample cannot be made or a student has significant impairments. Data collected from a variety of communication partners in a variety of settings should be used to complete this form.

Functional Communication Skill	Rubric
Communicative Interaction	☐Successful ☐Usually Successful ☐Frequently Unsuccessful ☐Not Successful
Evidenced by initiation, topic maintenance turn-taking, opening/closing conversations	Data Sources: Describe Performance:
Communicative Intention	☐Successful ☐Usually Successful ☐Frequently Unsuccessful ☐Not Successful
Evidenced by requesting objects/actions, commenting on objects/actions, etc.	Data Sources: Describe Performance:
Communicative Methods	☐Successful ☐Usually Successful ☐Frequently Unsuccessful ☐Not Successful
Evidenced by use of one or more modes of communication (e.g., verbal, manual sign, AT or AAC system, gestures, pointing)	Data Sources: Describe Performance:
Comprehension of Language	☐Successful ☐Usually Successful ☐Frequently Unsuccessful ☐Not Successful
Evidenced by appropriate actions or communicative responses indicating comprehension of what others say, sign, or show	Data Sources: Describe Performance:
Effect on Educational Performance	☐Successful ☐Usually Successful ☐Frequently Unsuccessful ☐Not Successful
Student demonstrates communication skills adequate for participation in current educational setting	Data Sources: Describe Performance:

APPENDIX G: Additional Forms and Checklists

Communication Observation Form

Student's Name: **Grade:**

Date(s) of Observation: **Time:**

Length of Observation:

Reason for Observation:

Setting (classroom, playground, cafeteria, etc.):

Physical Environment: Where is student seated?

☐ at table ☐ at desk ☐ on the floor ☐ on chair in group

☐ at listening center ☐ at learning center ☐ at chalkboard

☐ front of room ☐ middle of room ☐ back of room

☐ other:

Auditory Environment (background noise, outside noise, etc.):

Language Demands of the Activity/Instruction (include examples):

Other:

Is the student's communication comparable to that of other students?

Comments:

Summary:

Speech-Language Pathologist's/Technician's Signature Date

Sample Educational Assessment of Communication Skills

Student's Name: **Grade:**

Teacher: **Date:**

Academic Performance Rating:

	Reading	Writing	Science	Social Studies	Math
Current Grade					
State Assessment Score (if applicable)					

Communication Skills: Please compare the student's performance to that of his/her classmates. Answer all questions by placing a circle around the appropriate answer.

Communication in the Classroom	**Yes**	**No**	**Sometimes**
Do you have difficulty understanding this student?	Y	N	S
Does the student avoid speaking in class?	Y	N	S
Do peers tease the student about the way she/he talks?	Y	N	S
Do you feel the student's speech and language skills negatively affect his/her academic performance?	Y	N	S
Does the student appear to be upset when communicating?	Y	N	S
Have you observed the student's speech and language skills influencing his/her personal adjustment (including adult and peer relationships)?	Y	N	S
Does the student require classroom modifications to be successful?	Y	N	S
Does this student have difficulty attending? Check all settings that apply: ☐ one to one ☐small group ☐large group ☐ during lengthy instruction ☐noise in the environment	Y	N	S
Does the student have difficulty following directions?	Y	N	S
Does the student have difficulty understanding curriculum vocabulary and/or concepts?	Y	N	S
Does the student require excessive "wait time" to either comprehend or respond?	Y	N	S
Does the student have difficulty expressing ideas in an organized and coherent manner?	Y	N	S
Does the student use incorrect grammar?	Y	N	S
Does the student have difficulty asking relevant questions?	Y	N	S
Does the student exhibit noticeable hesitations, repetitions, and/or tension?	Y	N	S
Does the student's voice sound unusual (e.g., hoarse, nasal, high-pitched)?	Y	N	S
Does the student's speech rate/volume interfere with your ability to understand him/her?	Y	N	S
Does the student mispronounce sounds or words? Please provide examples:	Y	N	S
Have the parents expressed concerns regarding communication?	Y	N	S

If you have circled **yes** for any items, please complete the back of this form.

Describe the weaknesses of the student's speech and language skills and his/her academic progress.

Identify any classroom strategies that you have used to adapt to the student's communication needs.

What adaptations, modifications have you used to assist the child with communication in the classroom setting?

Comments:

Teacher's Signature: _____

Please return to _____ by: _____

Preschool Educational Assessment of Communication Skills

Student's Name: **Birth Date:**

Teacher: **Date:**

Please compare the child's performance with that of his/her peers.

The child:	Yes	Sometimes	No
uses social language (hi, bye, please, thank you)			
is learning new words every week			
repeats new words without being asked			
uses describing words (big, red, etc.)			
gets my attention with words			
rejects/denies/says "no"			
takes turns in a "conversation"			
asks for help			
is understood by familiar adults			
is understood by unfamiliar adults			
names pictures in a book			
listens to a short picture book			
answers "yes/no" questions			
answers "wh" questions			
asks questions with his/her tone of voice			
asks "yes/no" questions			
asks simple "wh" questions			
uses pronouns correctly (I, she, he, my, etc.)			
knows some songs or nursery rhymes			
has trouble saying sounds; list:			
is teased by peers about the way she/he talks			
has difficulty following directions			
has difficulty attending (If Yes or Sometimes, check all that apply) ☐ one to one ☐ during lengthy instruction ☐ small group ☐ large group ☐ noisy environment			
has noticeable hesitations, repetitions, or tension when speaking			
has an unusual voice (e.g., hoarse, hyper- or hyponasal, high-pitched)			
has a rate or volume that interferes with understanding him/her			

-Over-

Rate your concern for the child's communication skills.

0 1 2 3 4+

Approximately how many words are in the child's vocabulary?

☐ 10 ☐ 11 to 50 ☐ more than 50

How many words does the child usually combine into sentences?

Do the child's communication skills influence his/her adult and peer relationships or participation in activities?

☐ Yes ☐ No

If yes, explain:

What does the child do when your child is not understood? (Circle all that apply)

points or gestures gives up repeats the words says different words

Other (explain):

Teacher's Signature: _____

Please return to _____ by: _____

Parent Checklist: Speech-Language (School Age)

Student's Name: **Birth Date:**

Person completing this form: **Date:**

Your input will help us understand your child's speech and language skills. Please check the following comparing your child with other children his/her age. Thank you.

My child:	Yes	Sometimes	No
interrupts politely			
starts conversations appropriately and takes turns in a conversation			
stays on the topic and changes topics appropriately			
asks for help/clarification appropriately			
uses correct grammar			
uses complete sentences			
tells what happened in the recent past			
uses words to reject or deny information			
uses words to negotiate			
uses words to express feelings			
tells a story in sequence			
has a similar vocabulary to children his/her age			
is understood by family members and familiar adults			
is understood by unfamiliar adults			
can follow 2–3 step directions			
knows when a listener does not understand his/her message			
can reword information/questions if not understood by listener			
understands and remembers school vocabulary			
participates in conversations with friends			
understands figures of speech (for example, "butterflies in my stomach")			
is a good listener			
has trouble thinking of the right word to say			
has trouble saying what your child is thinking and getting to the point			
has trouble making speech sounds; list:			

-Over-

Rate your concern for the child's communication skills.

None 1 2 3 A lot

Does your child's voice change during the day? Yes No

If so, when is it better?

Please share any additional information you think would be helpful.

Please return to _____ by: _____

Parent Checklist: Speech-Language (Preschool)

Child's Name: **Birth Date:**

Person completing this form: **Date:**

Your input will help us understand your child's speech skills. Please check the following speech abilities. Thank you.

My child:	Yes	Sometimes	No
responds to his/her name			
says 10 words			
is learning new words every week			
repeats new words			
says 50 words			
puts two words together			
gets my attention with words			
rejects/says "no"			
asks questions with his/her tone of voice			
takes turns in a "conversation"			
asks for help			
says 3–4-word sentences			
is understood by family members			
is understood by familiar adults			
is understood by unfamiliar adults			
follows one-step directions			
follows two-step directions			
listens to a short picture book			
names pictures in a book			
answers "yes/no" questions			
answers "wh" questions			
asks "yes/no" questions			
asks "wh" questions (who, what, where, why, how)			
uses pronouns correctly (I, me, we)			
knows some songs or nursery rhymes			
participates in pretend play			

-Over-

Rate your concern for the child's communication skills.

None 1 2 3 A lot

What does the child do when your child is not understood? Check all that apply.

☐ points or gestures ☐ gives up ☐ repeats the words ☐ says different words

☐ other (explain):

Please return to _____ by: _____

Parent Checklist: Fluency/Stuttering

Child's Name: **Birth Date:**

Person completing this form: **Date:**

Your input will help us to understand your child's speech skills. Please check the following speech behaviors. Thank you.

My child:	Yes	Sometimes	No
repeats whole words "why, why, why, why"			
repeats parts of words			
repeats sounds at the beginning of words "w-w-w-w-hy"			
prolongs or holds onto a sound "w hy"			
blocks — sounds and airflow are shut off			
is frustrated by his/her speech difficulty			
has a family member who stutters			
has visible tension when speaking			
avoids speaking situations			
avoids eye contact			
has associated physical behaviors (eye blinking, body movements, grimacing, etc.)			
speaks rapidly			

Rate your concern for the child's communication skills.

None 1 2 3 A lot

What things seem to help your child's speech?

What things seem to make your child's speech worse?

Which situations seem to be the most difficult for your child?

Tell us about the speech of members of your family. Does anyone: speak like your child, speak rapidly, or stutter? If so, who? (Describe)

What other information do you think would be helpful for this evaluation?

Parent Checklist: Voice

Child's Name: **Birth Date:**

Person completing this form: **Date:**

Your input will help us understand your child's speech skills. Please check the following items. Thank you.

My child:	Yes	Sometimes	No
has a hoarse voice			
clears his/her throat frequently			
sounds nasal—talks through his/her nose			
sounds denasal—stuffed up			
speaks too quietly			
speaks too rapidly			
has pitch unusual for his/her age or sex			
speaks in a monotone			
has breaks in his/her voice			
is frustrated by his/her speech difficulty			
has a family member with similar difficulty			
has allergies			
has frequent ear infections			
is exposed to environmental factors like kerosene fumes, wood or cigarette smoke			
frequently yells or plays loud games (for example, car, gun, or animal noises)			
participates in sports or activities (singing) where he/she uses his/her voice loudly			

Rate your concern for the child's communication skills.

None 1 2 3 A lot

Does your child's voice change during the day? If so, when is it better? Please share information you think would be helpful.

Please return to _____ by: _____

Student Speech-Language Checklist: Kindergarten through 5th Grade

Student's Name: **Birth Date:**

Teacher: **Date:**

Directions: Please read each question and check the box that is the best answer. (If students need items read to them, please assist.)

	Yes	No	Sometimes	Don't Know
Do you like to talk with your family and friends?				
Do you like to answer questions in class?				
Do you like to talk in class?				
Do others tease you about the way you talk?				
Do people have trouble understanding what you say?				
Does your speech sound different from the other students'?				
Is it hard for you to make some of your sounds?				
Is it hard to hear the sound the letter makes?				
Can you follow the teacher's directions?				
Can you follow directions from your family?				
Can you tell what happened in a story you read or had read to you?				
Is it hard to think of the words you want to say?				
Is it hard to answer questions?				
Is it hard to remember information you have learned?				
Is it hard to learn new words?				
Is it hard to make complete sentences?				
Do you like the way your voice sounds?				
Do you speak in a loud voice or shout?				
Do you speak in a soft voice?				
Do you ever lose your voice?				
Do you repeat some of your words or sounds?				
Is it sometimes hard to get your words out?				
Is it hard for you to look at people when you talk?				

-Over-

Please answer the following questions:

1. What do you like best about the way you talk?

2. What would you like to change about the way you talk?

3. Would you like some help with the way you talk?

Student

Student Speech-Language Checklist: 6th Grade through 12th Grade

Student's Name: **Birth Date:**

Teacher: **Date:**

Directions: Please read each question and check the box that is the best answer. (If students need items read to them, please assist.)

	Yes	No	Sometimes	Don't Know
Do you like to talk with your family and friends?				
Do you like to answer questions in class?				
Do you like to express yourself in class?				
Do others tease you about the way you talk?				
Do people have trouble understanding what you say?				
Does your speech sound different from the other students'?				
Is it hard for you to make some of your sounds?				
Is it hard for you to hear the sound differences in words?				
Do you have difficulty using grammatically correct sentences?				
Do you have difficulty following oral directions?				
Do you have difficulty following written directions?				
Do you have difficulty recalling and telling what happened in a story you read?				
Do you have difficulty recalling and telling what happened in a story				
read or told to you?				
Is it hard to think of the words you want to say?				
Is it hard to answer questions?				
Is it hard to remember information you have learned?				
Is it hard to learn and remember new vocabulary words?				
Do you like the way your voice sounds?				
Do you speak in a loud voice or shout?				
Do you speak in a soft voice?				
Do you ever lose your voice?				
Do you repeat some of your words or sounds?				
Is it sometimes hard to get your words out?				
Is it hard for you to look at people when you talk?				

-Over-

Please answer the following questions:

1. What do you like best about the way you talk?

2. What would you like to change about the way you talk?

3. Would you like some help working on your speech and language skills?

Student

Speech and Language Therapy Data Sample Form

Student's Name: **Grade:**

Teacher(s): **Date:**

IEP Due Date:

SLP Services Listed on IEP:

Response Key:

(+) Correct (A) Correct w/cue (-) Incorrect (0) Incorrect w/cue

Date	Goal/Objective	Response	Observations

Speech-Language Therapy Log for _____ School Year

Student's Name: **Birth Date:** **Grade:**

Teacher(s): **Service Time:**

IEP Date Due: **Triennial Evaluation Due Date:**

Goals/Objectives:

Attendance Tracker:

T = Therapy A = Student Absent SD = Staff Development TA = Therapist Absent

C = School Closing H = Holiday M = Makeup Session S = Substitute Provided Session

	1	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	29	30	31
July																															
Aug																															
Sept																															
Oct																															
Nov																															
Dec																															
Jan																															
Feb																															
Mar																															
Apr																															
May																															
June																															

-Over-

Date	Data	Therapy Target and Results

Data Analysis Graph with Aim and Trend Lines

Student's Name: **Date:**

Use this form to graph aim and trend lines and document student progress over time. Label the dates for the data points at the bottom and indicate the amount or frequency of the skill or behavior on the left.

Description of Skill:

Baseline Skill Level: **Target Skill Level:**

Data for this graph was collected between **and**

Skill Graph Labels: Label the graph with dates and values for response rates.

Baseline: Calculate the baseline by averaging 3 trials.

Aim Line: Plot the baseline and target point and connect them to create an aim line.

Trend Line: Begin with an even number of data points, not including the baseline and target points. Divide the data points in half and draw a short vertical line through the mid-date for each set of data points. Draw a short horizontal line through the mid-rate (median) for each set of data points. Place a mark where the short lines intersect and connect the two marks to create the trend line.

Swallowing/Dysphagia Team Procedure Checklist

Student's Name: **Date:**

Speech Language Pathologist: **Nurse:**

Occupational Therapist: **Teacher:**

Use this form to document the actions of the dysphagia team. Attach additional pages as needed.

Swallowing Team Actions	Decision Yes—No—N/A	Date
Parent/guardian informed of concern		
Interdisciplinary consultation conducted		
Individual health care plan developed		
Referral made to physician for clinical evaluation		
Obtain results of Modified Barium Swallow Study		
IEP/504 team meeting held on _____ attended by **Classroom teacher** **Administrator** **SLP** **Nurse** **Occupational therapist** **Parents/guardians** **Other:**		
Physician referral for special diet received		
School cafeteria manager and parent notified of diet order		
Diet change started at school		
Training received on feeding techniques and emergency plan **Classroom teacher** **Administrator** **Paraprofessional** **SLP** **Nurse** **Occupational therapist** **Parents/guardians** **Other:**		
Feeding plan initiated		

Swallowing Disorder Consultation and Referral Form

Part 1: Referral to School-Based Swallowing Team

Student's Name: **Date:**

Person Requesting Consultation:

Instructions: Please check **all** characteristics that apply to the student.

Medical Information and Conditions

☐ Repeated respiratory infections/history of recurring pneumonia

☐ Vocal fold paralysis

☐ Craniofacial anomaly (cleft palate, velocardiofacial syndrome, etc.)

☐ Reported medical history of swallowing problems

☐ History of neurological disorder (e.g., cerebral palsy, brain injury, etc.)

☐ Weight loss/undernutrition

☐ Chronic constipation, diarrhea, or other gastrointestinal tract problems

☐ Reported reflux (GERD)

Observed Behaviors

☐ Requires special diet or diet modifications (e.g., thickener, soft food only)

☐ Poor upper body control

☐ Poor oral motor functioning

☐ Maintains open-mouth posture

☐ Drooling

☐ Nasal regurgitation

☐ Food remains in mouth after meals (pocketing)

☐ Wet breath sounds and/or gurgly voice quality following meals or drinking

☐ Coughing, choking, or frequent throat clearing during meals

☐ Swallowing solid food without chewing

☐ Effortful swallowing

☐ Eyes watering/tearing during mealtime

☐ Unusual head/neck posturing during eating

☐ Hypersensitive gag reflex

☐ Refusal to eat

☐ Food and/or drink escaping the mouth or tracheostomy tube

☐ Spitting up or vomiting associated with eating and drinking

☐ Limited or slurred speech

☐ Receives nutrition through feeding tube

☐ Mealtimes take more than 30 minutes

Additional Information or Comments:

Part 2: Interdisciplinary Swallowing Consultation

Student's Name: **Age:**

Physician: **Consultation Date:**

Medical history/diagnosis:

List any known food allergies:

Current diet:

Designated case manager:

Team members (names/titles):

General Observations of the Student during Consultation

Behavior: ☐ cooperative ☐ resistant ☐ refusal ☐ other:

Alertness: ☐ alert ☐ lethargic ☐ irritable ☐ fatigues easily
☐ other:

Follows directions: ☐ verbal ☐ gesture/imitation ☐ none ☐ 1-step
☐ 2-step ☐ complex

Vision: ☐ no known deficit ☐ deficit:

Abnormal reflexes observed:

Trunk: ☐ kyphosis ☐ asymmetric ☐ dystonia ☐ scoliosis
☐ excessive extension ☐ other:

Head control: ☐ adequate ☐ poor ☐ receives manual positioning
☐ receives external positioning ☐ excessive head/neck hyperextension
☐ reflexive position patterns

Facial: ☐ asymmetric ☐ contortions ☐ jaw extensions ☐ increased tone
☐ decreased tone ☐ grimaces/tics ☐ open-mouth posture
☐ other:

Breathing patterns: ☐ mouth breather ☐ audible inhalation ☐ nasal congestion
☐ tracheostomy* ☐ ventilator*

*If student is tracheostomized and/or ventilator dependent, consideration for medical consultation is advised prior to feeding trials.

Observation of Feeding
During this observation, the student was fed by:

Positioning: ☐ Chair ☐ Wheelchair ☐ Tumbleform ☐ Other:

Utensils used (including adaptive utensils):

List of liquids and foods used:

Feeding Trial Data Key: (+) present (-) not present (DNT) did not test/observe

	Food consistency: Liquid	Food consistency: Puree	Food consistency: Soft	Food consistency: Solid	Indicate observed behaviors	Additional comments
Accepts food						
Foods avoided						
Lips						
Poor lip closure						
Drooling						
Reduced lip action to clear material						
Tongue						
Poor bolus formation/ movement						
Decreased anterior/posterior movement						
Food residue						
Absence of rotary jaw movement						
Munching jaw movement						
Delayed swallow initiation						
Swallow delay						
Cough following swallow						
Increased clearing throat						
Residual food in oral cavity						
Cued swallow						

Additional Comments / Observations:

Part 3: Request for Physician Input Regarding Swallowing Concerns

Student's Name: **Date:**

Birth Date:

Dear Dr. ,

Your patient was observed during speech and/or occupational therapy on
because of feeding and swallowing concerns. The clinical indication(s) of oral pharyngeal dysphagia (with possible aspiration) included:

☐ Pneumonia (current or history)
☐ Chronic low-grade fever
☐ Chronic, copious secretions
☐ Gurgled vocal quality
☐ Audible breathing
☐ Changes in respiration rate
☐ Other:

☐ Coughing
☐ Oral Residue
☐ Gagging
☐ Delay in swallowing/reflex
☐ Refusal to eat
☐ Questionable nutritional intake

To ensure safe and adequate nutrition and hydration during school, we suggest the following:

☐ Special diet:

☐ Modified barium swallow/videofluoroscopy in a medical setting

☐ Other:

Additional comments:

Sincerely,

School-Based Dysphagia Case Manager Phone

Physician Feedback: (Please return your recommendations via facsimile.)
I recommend the following:

☐ Modified barium swallow/videofluoroscopy

☐ Interdisciplinary clinical swallowing evaluation in medical setting

☐ Special diet:

☐ Other:

☐ I have reviewed. No recommendations at this time.

Physician Signature _____ Date _____

Voice Referral Form

Part I: General Information

Student's Name: **Gender:** **Birth Date:**

Address:

School: **Grade:** **Date:**

Parent's Name: **Speech-Language Pathologist:**

Part II. Speech-Language Evaluation Results (to be completed by speech-language pathologist)

Reason(s) for referral:

Student's complaint (if any):

Brief description of voice (e.g., onset pattern, variations, impact on communication, student's level of awareness and motivation for possible therapy): Include relevant oral-peripheral examination and hearing screening/evaluation results.

Clinical impressions:
Rate each attribute

(1 = normal, 2 = Mild Impairment, 3 = Moderate Impairment, 4 = Severe Impairment, 5 = Profound Impairment, or X = Not Observed).

Quality (breathy, hoarse, harsh)	
Muscle tension	
Pitch (too high/too low)	
Oral resonance	
Nasal resonance (hypo-/hypernasal/mixed)	
Phonation breaks	
Loudness (too soft/too loud)	
Breathing pattern	
Pitch breaks	
Abusive vocal behaviors	
Glottal attack (hard/soft)	

Maximum phonation time: /a:/ = seconds

s/z ratio (maximum /s:/ = seconds/maximum /z:/ = seconds):

Other (describe in detail):

Signature of speech-language pathologist Date

Student's Name: Date:

Part III. Parent Concerns (to be completed by the parent or caregiver)

Instructions: Please respond with "yes" or "no" and provide additional information as needed.

Does your child's voice sound like that of other family members?	
Has your child had frequent ear infections?	
Does your child have a sore throat frequently?	
Does your child have allergies?	
Does your child often breathe through the mouth?	
Does your child snore while sleeping?	
Does your child seem unusually tense when speaking?	
Have you noticed that your child has a persistent voice problem?	
If yes: Does your child's voice sound hoarse?	
Does your child seem short of breath when speaking?	
Does your child's voice sound as though it is coming through his/her nose rather than through the mouth?	
Does your child's voice sound as though they have a stopped-up nose?	
Does your child's voice sound worse in the morning?	
Does your child's voice sound worse in the evening?	
Does your child seem to speak more loudly than necessary?	
Has your child had a serious injury to the neck?	
Has your child had a serious injury to the head?	
Has your child had a serious injury to the chest?	
Has your child had any surgery to the lips, mouth, throat, or ears?	
If yes, please describe and include dates:	
Does your child have any problems swallowing?	
Does your child often have heartburn or acid indigestion?	
Does your child use tobacco products?	
Does your child consume caffeinated drinks?	
Does your child consume alcoholic beverages?	
Is your child in choral groups, cheerleading, or other talkative activities?	
Is your child frequently exposed to dust, mold, or air-borne chemicals?	
Does your child have any other health problems?	
Describe:	
Is your child currently taking any medications?	
Please list:	
When did you first notice the problem and how has his/her voice changed since then?	

Parent signature **Date**

Student's Name: **Date:**

Part IV: Physician's Impressions (to be completed by licensed physician)

What is the physical condition of the patient's larynx?	
Are there any abnormal growths/edema on any part of the vocal mechanism? If so, please specify type and location.	
Are there vocal fold asymmetries during phonation? If yes, please describe.	
Is there evidence of inadequate velopharyngeal function? If yes, please describe.	
Is there obstruction(s) of the nasal passages? If yes, please explain.	
Is there presence of any sinus infection or nasal allergy?	
During phonation did the vocal folds exhibit normal amplitude?	
Is there evidence of excessive muscular tension during phonation?	
How were the vocal folds visualized during the examination?	
What is your medical diagnosis?	
Are there any contraindications for voice therapy?	
How may the speech-language pathologist best contact you for consultation if needed (with parental consent)? Phone #: E-mail: Examining Physician's Signature: Date: Please return this form to at (address).	

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