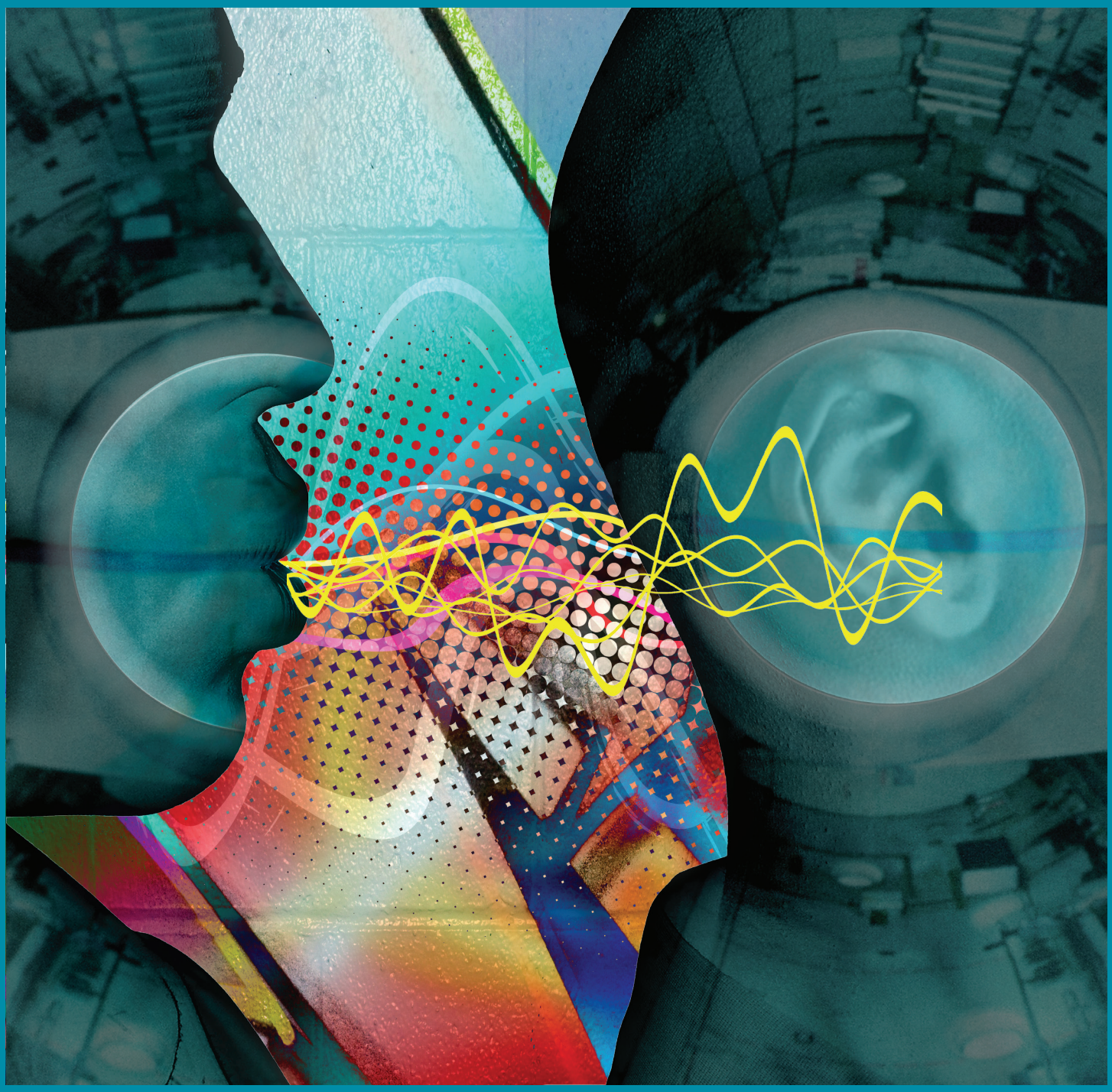
Speech-Language Pathology Services in Schools: Guidelines for Best Practice

Revised 2018



Virginia Department of Education, Office of Special Education and Student Services

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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) plays an important role in education and may serve on both the special education and general education teams. SLPs may serve students directly or work with educators and families to address communication and language needs.

This guidelines document is designed to assist school-based SLPs, administrators, teachers, and parents as they explore the role of the SLP in the school-based setting and work together to serve students in Virginia.

The Virginia Department of Education (VDOE) *Regulations Governing Special Education Program for Students with Disabilities* and other VDOE guidance documents should be used in conjunction with this resource.

The VDOE employs staff who provide assistance understanding information provided in this and other VDOE resources. Additional information may be found on the VDOE Web site at: *www.doe.virginia.gov* or by contacting the VDOE at:

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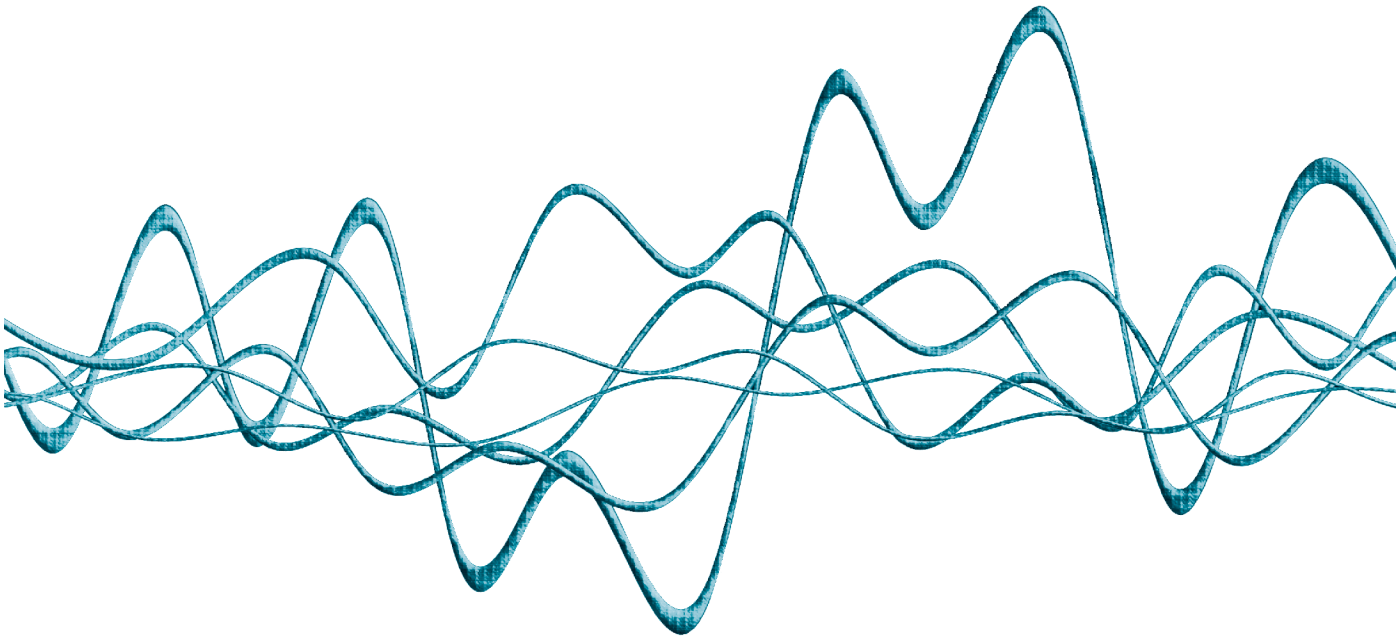


Commonly Used Acronyms

AAC	Augmentative and Alternative Communication
APD	(Central) Auditory Processing Disorder
ASD	Autism Spectrum Disorders
ASHA	American Speech-Language-Hearing Association
AT	Assistive Technology
BASLP	Board of Audiology and Speech-Language Pathology
BICS	Basic Interpersonal Communication Skills
CALP	Cognitive Academic Language Proficiency
CCC	Certificate of Clinical Competence granted by ASHA
CF	Clinical Fellowship (supervised work experience after completing Master's degree requirement, required for CCC)
CLD	Culturally and linguistically diverse
CMS	Centers for Medicare and Medicaid (the agency overseeing Medicaid)
CFR	Code of Federal Regulations
dBHL	decibels, measured in Hearing Level (measure of a sound's loudness)
DMAS	Department of Medical Assistance Services (Virginia's Medicaid agency)
DSM	Diagnostic and Statistical Manual
EBP	Evidence-Based Practices
EI	Early Intervention
ESL	English as a Second Language
FAMIS	Family Access to Medical Insurance Services (Virginia's health insurance programs for families that do not qualify for Medicaid)
FAPE	Free Appropriate Public Education
FERPA	Family Educational Rights and Privacy Act
FM	Frequency Modulated
Hz	Hertz (measure of a sound's frequency)
ICD-9-CM	International Classification of Diseases, 9th 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	Infant and Family Service Plan (treatment document for children receiving services through EI)
LEA	Local Education Agency
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
NBPTS	National Board for Professional Teaching Standards
NOMS	National Outcome Measurement System (developed by ASHA)
PLOP	Present Level of Educational Performance
POC	Plan of Care
RtI	Response to Intervention
SHAV	Speech-Language-Hearing Association of Virginia
SOL	Standards of Learning
SRS	Severity Rating Scale
TTAC	Training and Technical Assistance Centers
USC	United States Code
VAC	Virginia Administrative Code
VDOE	Virginia Department of Education

Overview of School-Based Speech-Language Pathology

This opening section addresses questions that frequently arise about:

- The role of the SLP
- Personnel requirements for licensure and duties
- Supervision
- Skill development, and
- Recruitment and retention of SLPs.

Role of the School-Based Speech-Language Pathologist

The focus of school-based speech-language pathologists is the communication abilities of students. The school-based speech-language pathologist's goal is to remediate, improve, or alleviate student communication and swallowing problems within the educational environment. To meet this goal, school-based speech-language pathologists:

(a) prevent, correct, improve, or alleviate articulation, fluency, voice, language, and swallowing impairments

(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).

Regulations Governing Special Education Programs for Children with Disabilities in Virginia[1] *(Virginia Special Education Regulations)*, 8 VAC 20-80-10 et al. defines speech-language pathology services as: identification of children with speech-language impairments, appraisal and diagnosis of the impairment, referral for medical or other professional attention, provision of speech-language services for prevention or habilitation of communication impairments, and counseling and guidance for parents, children and teachers regarding speech and/or language impairments. Speech-language pathology services are both special education and a related service and may also be provided as part of a general education initiative. Table 1 summarizes the roles and responsibilities of school-based speech-language pathologists.

The school-based speech-language pathologist may serve as a member of a variety of teams that make decisions regarding evaluation, eligibility, and services. The speech-language pathologist does not make decisions in isolation regarding the needed evaluation components, the child's eligibility for special education and related services, or the goals and objectives of intervention. The needs of students with disabilities are best addressed in a transdisciplinary manner with a team of professionals providing services.

Speech-language pathologists may also provide support when students are not eligible for speech-language services by participating on various prevention/early intervention teams (e.g., Instructional Support Teams, teacher assistance teams, and child study committees). On these teams, the speech-language pathologist may conduct observations, complete assessments, plan with teachers, model interventions, coach teachers, and/or gather data, all in the context of general education. 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 and their employers must be willing to participate in continuing education to maintain best practice in aspects of the field such as assistive technology, dysphagia

1 *Regulations Governing Special Education Programs for Children with Disabilities in Virginia* became effective July 7, 2009. These regulations can be found on the Virginia Department of Education Web site at www.doe.virginia.gov

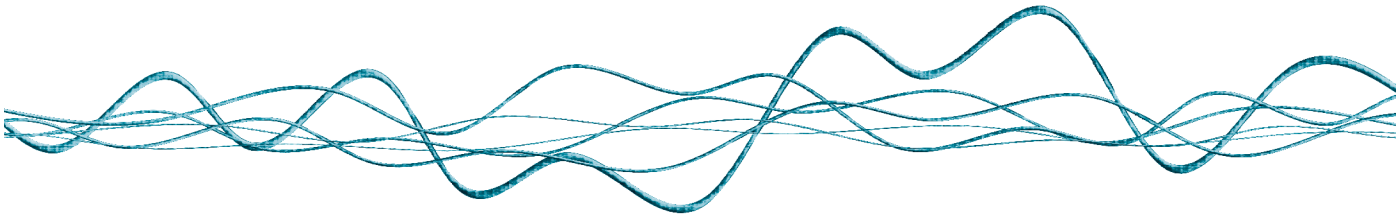


Table 1. Roles/Responsibilities of School-Based Speech-Language Pathologists

Role	Speech-Language Pathologist Responsibilities
Prevention	Provides pre-referral consultations and involved in various initiatives including RtI
Identification	Conducts speech-language and hearing screenings Identifies if students failing screening should be referred for evaluation
Evaluation: Determining Need for Evaluation	Serves 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
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
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 overall program evaluation
Supervision and Mentorship	Supervises university practicum students, clinical fellows, and paraprofessionals Mentors new SLPs
Documentation	Completes progress reports (for special education and Medicaid) Completes performance appraisals for supervisee
Collaboration	SLPs work 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 EBP Stays abreast of educational issues

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

(swallowing), and auditory-oral/ auditory-verbal skill development for children with cochlear implants.

In addition, a speech-language pathologist should be up-to-date in his/her knowledge of both general and special education, including education standards, curriculum, state and local assessments, parental rights and responsibilities, and special education requirements and procedure. The Virginia Department of Education publishes guidance documents on a number of topics that may be of interest to school-based speech-language pathologists. Guidance documents, available online at www.doe.virginia.gov, address topics such as the evaluation and eligibility process, specific disability areas such as student with autism spectrum disorders or those who are deaf or hard of hearing, and special education topics such as extended school year and resolving disputes. Speech-language pathologists are encouraged to access VDOE guidance documents when appropriate. A listing of documents is provided in Appendix A of this document.

Speech-Language Pathologists

All students who have IEPs that specify the provision of speech-language services must receive those services by a qualified speech-language pathologist (Virginia Special Education Regulations, 8 VAC 20-81-40). The Board of Audiology and Speech-Language Pathology license types are based on education in field of 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). Speech-language pathologists in the schools must hold a valid license issued by the Virginia Department of Health Profession's Board of Audiology and Speech Language Pathology. Speech-language pathologists serving students in schools may have a full license, school only license, or a provisional license. Board of Audiology and Speech-Language Pathology regulations required that "The holder of a provisional license in audiology shall only practice under the supervision of a licensed audiologist, and the holder of a provisional license in speech-language pathology shall only practice under the supervision of a licensed speech-language pathologist (18VAC 30 21 70 D)." Those providing supervision must adhere to specific regulatory requirements and notify the Board of Audiology and Speech-Language Pathology (18VAC 30 21 70 E).

The 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 and that the decisions regarding a student's eligibility for special education include personnel representing the discipline providing the assessments. In addition, ***Virginia Special Education Regulations*** specify that the special education provider on the IEP Team will be a speech-language pathologist for students whose only disability is speech-language impairment.

Licensed speech-language pathologists may provide supervision for speech-language pathology assistants. To provide supervision for clinical fellows or university students in the school setting, SLPs must have national certification through American Speech-Language Hearing Association (ASHA).

Effective January 2020, ASHA requires clinical supervisors and clinical fellowship mentors have nine months of experience after being awarded the CCC-SLP and two hours of professional development in the area of supervision. Additionally, effective for the 2020-2022 certification renewal, all CCC-SLPs will be required to have one hour of continuing education in ethics.

Speech-Language Pathology Assistants

Some divisions use assistants to support the speech-language pathologist. The ***Virginia Administrative Code*** addresses the qualifications of Speech-Language Pathology Assistants (SLPAs), scope of practice for SLPAs, and supervisory responsibilities of the licensed SLP (18 VAC 30 21 140). The Virginia Administrative Code (18 VAC 30 20 140) addresses documentation of supervisory responsibilities, frequency of the supervising speech-language pathologist personally delivering treatment or services to the student, and disclosure of the unlicensed assistant to student and family.

The Board of Audiology and Speech-Language Pathology has regulations to clarify the scope of practice and duties not permitted by SLPAs. The SLPA is not allowed to practice independently and must be supervised by qualified staff. Given these restrictions, the following list reflects some of the tasks a speech-language assistant may assume:

- Assist with speech, language, and hearing screenings without clinical interpretation of results.

2 The specific requirements are reflected in the Board of Audiology and Speech-Language Pathology regulations found at ***https://www.dhp.virginia.gov/aud.***

- Perform activities for each session that are routine and do not require professional judgment, in accordance with a plan developed and directed by the speech-language pathologist who retains the professional responsibility for the student.
- Document a student's performance and report information to the supervising speech-language pathologist.
- Assist with preparing materials and programming augmentative and alternative communication devices
- Assisting students with transitioning to and from therapy sessions and clerical duties.

Speech-language pathology assistants may not be used to provide services to the caseload in the absence of qualified speech-language pathologists. A speech-language pathologist with an assistant may serve more students than the division average, but not higher than the caseload maximum of 68 (8 VAC 20-81-340). School divisions may consider the addition of a speech-language assistant to facilitate the completion of nonclinical duties and serve as a recruitment and retention tool.

For further information on using special education paraprofessionals, see the Virginia Department of Education document, *The Virginia Paraprofessional Guide to Supervision and Collaboration: A Partnership*.

Substitutes

The U.S. Department of Education's Office of Special Education Programs (OSEP) has addressed the impact of an interruption of services on the student's right to a free and appropriate public education (FAPE). In addressing an inquiry in this regard, OSEP stated that in order to meet its FAPE responsibilities, a school division is generally responsible for making alternative arrangements to provide services set out in a student's IEP when there is an interruption of services. This may be due to the absence of the service provider or other school-related activities. However, the school division is not obligated to do so when the student is unavailable for other reasons, such as absences from school.

Given these requirements, school divisions face significant challenges when they have vacant positions or temporary absences. Every effort should be made to secure a qualified speech-language pathologist. School divisions should maintain an open job announcement for a qualified speech-language pathologist for ongoing recruitment efforts. The division may wish to contract with a private agency to provide services, assuring that their personnel hold a license from the Virginia Board of Audiology and Speech-Language Pathology. In addition, divisions should recruit a pool of qualified speech-language pathology substitutes to cover caseloads during short- or long-term absences. (Retired speech-language pathologists 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 the IEP for scheduling services to enable them to reschedule the student at another time. However, when rescheduling, the division must ensure that the student does not receive any reduction in the services specified on the IEP.

For long-term interruption of services, the division must inform the parents of students who are not served or underserved of the interruption of services. The interruption may be due to a vacancy or medical leave. The parents must be assured that once the services resume, the IEP team will determine if the student is entitled to compensatory services. The compensatory services may be provided during the summer, during school breaks, or by providing additional time during the school year. Division speech-language pathologists may provide these services and should be appropriately compensated for working additional hours.

Nonqualified substitutes shall not conduct assessments, write evaluation reports, prepare IEPs, represent speech-language pathology at meetings, or teach new skills. These tasks are reserved for qualified speech-language pathologists.

Supervision and Mentoring

Supervision

Speech-language pathologists may be supervised by a variety of persons within a school division: principal, special education director, speech-language pathology coordinator, or lead speech-language pathologist. The supervisor may not be familiar with the field of speech-language pathology and may come from a different background in general or special education.

The speech-language pathologist has the responsibility to provide his/her supervisor with sufficient information

about the role and responsibilities of speech-language pathologists to enable the supervisor to provide effective supervision. The supervisor can provide effective evaluation of the speech-language pathologist'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 the speech-language pathologist's therapy skills. Speech-language pathologists may wish to work collaboratively to self-evaluate or peer-evaluate their therapy skills.

Speech-language pathologists may also find themselves in supervisory roles for fellow speech-language pathologists seeking to complete the clinical fellowship requirements for ASHA's certificate of clinical competence, for paraprofessionals, for university practicum students, or for school-approved volunteers. Speech-language pathologists in such supervisory roles should pursue continuing education to develop and enhance their supervisory skills.

Mentoring

One of the most challenging experiences for a speech-language pathologist can be the first year of employment in a public school setting. Mentoring has proven to be a valuable technique to assist new personnel in their new work situations regardless of their level of professional experience. Mentoring is a cooperative arrangement between peers in which an experienced speech-language pathologist provides a newly hired SLP 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).

School divisions may have procedures in place for a mentoring program; however, there are numerous resources available. The *Guidelines for Mentor Teacher Programs for Beginning and Experienced Teachers* is available on the Virginia Department of Education Web site at *www.doe.virginia.gov*. These guidelines point out that "losing a talented teacher because of inadequate support during the early years is a tragic loss that can be avoided."

The guidelines identify certain mentoring objectives that are applicable to new school-based speech-language pathologists. Objectives include facilitating a seamless transition into the first year of employment in the schools, preventing isolation, and improving skills. Mentoring programs may be a tool used to retain quality speech-language pathologists. Supporting the new SLP and putting theory into practice are benefits in addition to improving morale, communications, and collegiality.

Table 2. Responsibilities of Mentors and Newly Hired SLPs

Newly Hired SLP	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	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, division 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.

What Every Special Educator Must Know: Ethics, Standards, and Guidelines, published by the Council for Exceptional Children, offers 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 individual are shown in Table 2.

Technical Assistance and Professional Development

The Virginia Department of Education (VDOE) and the VDOE Training and Technical Assistance Centers (TTACs) offer many free resources and low cost professional development opportunities for school speech-language pathologists. Local and regional training events, access to telephone seminars and collaboration with university training programs provide opportunities for SLPs to learn about evidence-based practices. Resources can be found by accessing the state Web-based community of learning online at www.ttaconline.org. On this Web site free online training modules, called 'webshops', are available on topics such as phonological processes, data collection, and augmentative communication. By utilizing these tools, educators and school divisions can access free professional development.

Speech-language pathologists are encouraged to work together to share and discuss current information and research. Journal discussion groups and distance education opportunities like ASHA telephone seminar replays provide opportunities for high-quality professional development. Professional development opportunities through professional associations including the Speech-Language Hearing Association of Virginia (SHAV), ASHA, and ASHA special interest divisions provide current evidence-based practices in the field of speech-language pathology.

Table 3. Equipment, Materials, and Space for School-Based SLP Use in School Setting

Equipment

Teacher's desk and chair;

Student furniture of correct sizes and adequate number;

File cabinets or drawers with locks;

Adequate and secure storage for materials and equipment;

Marker or chalk board, bulletin board, mirror;

Computer, microphone, speakers, printer, and workstation for computer;

Clock; and

Access to:
Penlight and otoscope; Recording and playback equipment; Assistive communication devices Audiometer (calibrated annually); Phone for confidential conversations; and Copy machine and paper shredder.

Materials

Computer software, including word processing, spreadsheet, database and creation software; clinical evaluation and instructional software; assistive technology software;

Current norm-referenced assessment tools and protocols;

Materials for informal assessment;

Therapy and instructional materials and supplies;

Access to instructional materials and textbooks used in the classrooms;

File folders/pocket folders;

Disposable gloves (latex-free); and

Office supplies – stapler/staples, scissors, pencil sharpener, paper clips, pens/pencils, correction fluid, post-its, hole punch, chalk or dry erase markers.

Space

Location: The room should be located away from noisy activities (gym, band room, cafeteria, etc.) and in an area that is readily accessible to non-ambulatory students.

Size: The room should be of an adequate size to allow for small group activities. Generally, 180 square feet is recommended if the room also serves as an office for the speech-language pathologist.

Climate control: The room should have adequate ventilation and climate control.

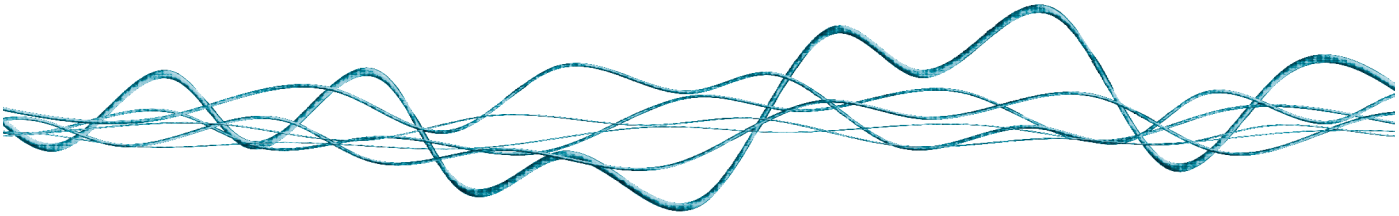
Lighting: Adequate lighting is necessary to allow for testing and observing.

Internet access

Wiring: A minimum of two 110-volt double outlets

Availability: To provide privacy for assessment, conferences and therapy.

Acoustics: Acceptable acoustics optimize instruction.



Work Environment

Adequate facilities for the many services provided by speech-language pathologists are necessary to meet the IEP requirements of students and to meet IDEA and Americans with Disabilities Act of 1990 regulations. In addition, specialized equipment and materials may be required to meet the goals and objectives of students' IEPs. Table 3 contains recommendations to meet the need for adequate facilities and materials and equipment.

The school division should provide adequate maintenance and prompt repair of any equipment that is needed to meet the IEP goals of students. As technology advances, equipment should be updated.

Speech-language pathologists should work with building principals and special education administrators to identify appropriate locations and to prepare a budget to secure the necessary equipment and materials. Speech-language pathologists must remain up-to-date in their knowledge of appropriate materials and technology.

Recruiting/ Retaining Qualified Speech-Language Pathologists

Recruiting and retaining qualified speech-language pathologists for school division's vacancies is a challenge for school divisions statewide. A variety of creative approaches to enhance work conditions or employment opportunities can be used to recruit and retain qualified staff. Speech-language pathologists 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 caseloads, paying membership dues in professional organizations such as the American Speech-Language-Hearing Association (ASHA) or the Speech-Language-Hearing Association of Virginia (SHAV). Additionally, school-based SLPs report that school divisions sometimes provide continuing education to assist in maintaining ASHA certification, provide laptop computers, and provide volunteer, clerical support or a SLP assistant to assist the SLP as a recruitment or retention incentive.

Some examples of **employment opportunities** include creating part-time positions, with benefits, enabling job-sharing, and recruiting of retired speech-language pathologists for long-term substitutes or part-time personnel. Financial incentives such as providing a salary supplement for maintaining national (ASHA) certification (a percentage differential or lump-sum addition to annual salary) or for billing Medicaid are also reported. Extending contracts to eleven months for certain staff to cover summer evaluations, services and administrative responsibilities is another option school divisions may consider when addressing recruitment issues.

A number of school divisions have determined that the American Speech-Language-Hearing Association's certificate of clinical competence is equally rigorous and comparable to the National Board for Professional Teaching Standards (NBPTS) requirements. 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).

Shortages of school-based speech-language pathologists are an ongoing concern for many school divisions. Because speech-language pathologists are also employed in noneducational settings, recruiting efforts should focus on more than traditional teacher recruitment strategies and be ongoing throughout the year. Table 4 provides a checklist of strategies and recruitment opportunities that may be used by school divisions.

Table 4. SLP Recruitment Strategies

- Participate in local, regional, state and national job fairs (e.g., SHAV and ASHA),
- Post job opportunities on professional Web sites (e.g., ASHA, SHAV, and VDOE sponsored *www.teacher-teacher.com*),
- Obtain mailing lists of local SLPs from professional associations (e.g., SHAV, ASHA) or state agencies (e.g., the Board of Audiology and Speech-Language Pathology),
- Contact state and regional universities with master's programs in speech-language pathology to recruit graduate students,
- Serve as a site for student practicum or internships with state or regional universities, and
- Create part-time positions for retirees or SLPs who have left the work force.

Evidence-Based Practice

The use of 'scientifically-based research' and evidence-based practice (EBP) is indicated by the Elementary and Secondary Education Act (ESEA), and state and local policies and procedures. EBP is a term that describes a model for professional work and also a way of working that increases accountability and student outcomes. This section includes:

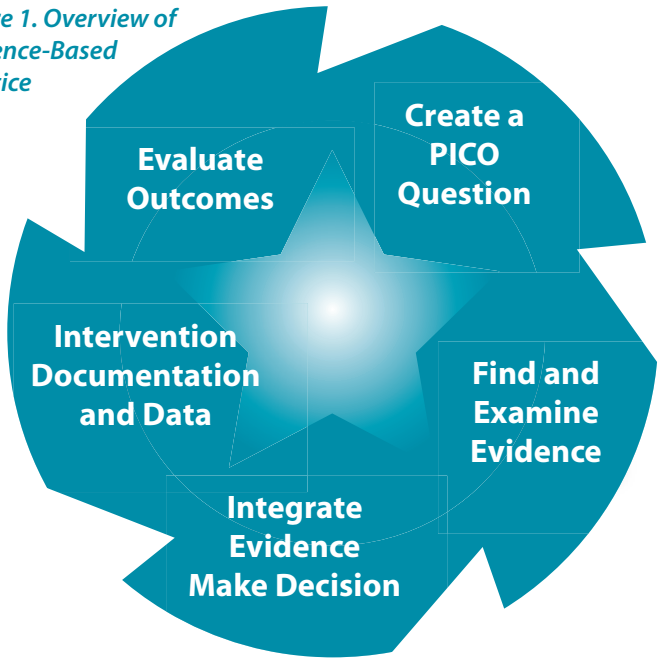
- an overview of evidence-based practice,
- information on documentation and data collection, and
- evaluation of outcomes.

Overview of Evidence-Based Practice

Speech-language pathologists who serve students in Virginia public schools should implement 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 & Paradiso, 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.

Figure 1. Overview of Evidence-Based Practice



Create a PICO Question

Evidence-based practice begins with clarifying the specific issue or decision that must be addressed. 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 (www.apa.org), the Education Resources Information Center's (ERIC) public database (www.eric.ed.gov), or PubMed's Medline (www.ncbi.nlm.nih.gov/pubmed), 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 (www.asha.org/publications). Publications that

appear to address the PICO question must be obtained and reviewed in order to complete the next step of the process: 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 literatures 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 (*www.cochrane.org)*, 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 are 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 Web site.

Integrate Evidence and Make Decisions

In their recent description regarding use of EBP to make clinical decisions about language intervention for children in schools, Gillam and Gillam (2006) summarize 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, interest, engagement, activities, and opinions of the family.

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

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.

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. Additional information on documentation and data collection is provided in the following section of this chapter and online at *www.ttaconline.org*.

Evaluate Outcomes

Professionals cannot claim to 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) or the "Guide to Evidence-Based Practice" available online at *www.linguisystems.com/pdf/EBPguide.pdf*.

Documentation and Data

An essential part of the job for every SLP is maintaining appropriate documentation and data collection systems. Documentation includes recording dates (mm/dd/yyyy) 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 appropriate. Documentation provides a record of IEP service implementation and information for progress reports and parent/teacher conferences. Documentation should also include the evidence used when selecting interventions in accordance with EBP. It is recommended that documentation be maintained for five to seven years.

Data is 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:

- To inform the evidence-based decision-making cycle
- To identify current skills levels or present levels of performance
- To evaluate outcomes and determine mastery of goals
- To document progress and develop future goals
- To measure progress over time
- To provide a record for the IEP team and educators.

Data should be collected and reviewed regularly. IDEA (2007) 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 different kinds of data that can be collected in the school environment. Data can be qualitative or quantitative.

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 same behavior. Quantitative data includes 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 record duration cues used.

Qualitative data involves 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 acknowledges 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 includes 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. The VDOE Training and Technical Assistance Center (TTAC) Web site www.ttaconline.org includes free training on data collection and data-based decision-making for speech-language pathologists.

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 collected, by whom, and how often it is 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, or
- 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 than 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 F contains sample data collection forms. Training on data collection for SLPs is available on www.ttaconline.org and provides additional information on data collection, sample forms for assessment, and data collection during intervention.

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, 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	This data notes 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 records 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 is 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 measures 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.	Scoring a student's narrative of a wordless picture book before and after intervention.
Rating Scales	Rating scales can be used to quantify descriptions or observations of behavior.	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. This 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 impacted 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 should consider **continuous** and **interval** data collection. **Continuous data** collection would involve 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 an appropriate measure of student performance.

Evaluation of Outcomes

Data collected should be reviewed by speech-language pathologists at regular intervals and analyzed to determine outcomes. The review of data at naturally occurring times (progress reporting and annual IEP) also informs SLPs and IEP teams if adjustments to the program should be considered.

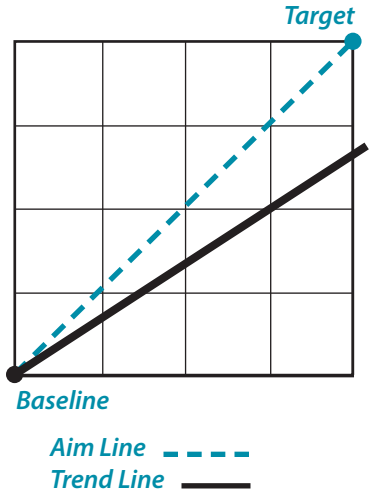
Graphs of data provide a picture of progress and can be used effectively with students and parents to discuss changes in performance for specific skills or show change over time. When a clear target is set for a skill, this can be included on the graph as the target or goal.

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 assist in determining the need for any changes to the intervention.

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. A sample of an aim line and trend line graph is pictured in Figure 3. Instructions for creating this type of graph are provided in Appendix E.

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 consider instructional changes.

Figure 3. Aim and Trend Line



This trend line shows student not progressing at a rate that will meet the target or goal within the time period.

When interventions are successful, documentation should show student progress that exceeds the normal developmental trajectory. In other words, the student should learn more than they 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 their 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 the 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 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 appropriate, in the general education curriculum (*Virginia Special Education Regulations,* 8 VAC 20-81-70). The VDOE publication, *Guidance for Evaluation and Eligibility for the Special Education Process,* provides specific information on referral, assessment, and eligibility decision-making.

Upon referral for evaluation, a team, having the same composition as the IEP team and other qualified individuals as appropriate, reviews existing data and determines whether additional data are needed to determine eligibility. The team reviews: evaluations and information provided by the parents of the student; current classroom-based and state assessments, and observations; and observations by teachers and related services personnel (*Virginia Special Education Regulations,* 8 VAC 20-81-70 B). If the team decides that additional data are needed to determine whether a student is eligible for special education and related services due to a possible communication disorder, a full and complete assessment of communication abilities may be conducted by the SLP. Other professionals in the school division or in the local medical community may complete other assessments as requested by the team.

The evaluation of a student to determine whether he/she has a speech-language impairment should be multifaceted and include multiple data sources (teachers, parents, students, other service providers), 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 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, and
- present information for determining whether the student has a speech-language impairment that adversely affects educational performance.

Speech-language pathologists have expertise in language and should ensure that all components of the evaluation consider language differences and dialect use. Evaluation data that provides evidence of dialect use or language difference should be documented and may not be considered a disability. When language differences or dialects are inappropriately viewed as errors, students may be inappropriately identified as having a disability. Virginia regulations clearly state that *"tests and other evaluation materials used to assess a student must not be discriminatory on a racial or cultural basis."* (8VAC 20-81-70) Additional information on language diversity is provided in the special topics section.

During a speech-language assessment, all procedures, tests, and materials must meet specific conditions (*Virginia Special Education Regulations,* 8 VAC 20-81-70 C). 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, to participate 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 eligible, 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, 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.
- No single procedure can be used as the sole criterion for determining an appropriate educational program for a student.

Comprehensive Assessment

A thorough and balanced assessment is mandated by special education regulation. 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.

A comprehensive assessment requires four sources of information as shown in Figure 4. Two sources, academic activities and contextual tests, provide information that is available through every student's general school experiences. These school-based sources document how a child communicates in the school environment and how their speech and language abilities impact educational achievement. For preschool-age children who do not participate in a formal school program, these data will be gathered with parents and caregivers. Preschool data should focus on participation in the home and community and developmentally appropriate activities.

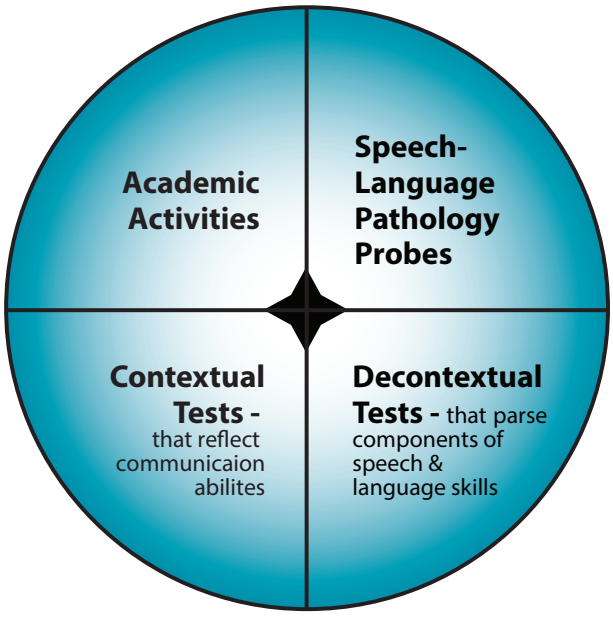


Figure 4. The Components of Comprehensive Assessment

The remaining two assessment sources, SLP probes and decontextualized tests, are specific to the field of speech-language pathology. Within the category of school-based data sources, half of the assessment information will be gathered through systematic observations in a variety of settings, while the remaining half will be gathered by examining measures of academic achievement that are common to all children as part of the education system. Within the category 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 be comprised of tests of specific speech-language skills. The use of both observation and measurement for the four data sources is shown in Figure 5. Gathering data from each of these four sources will be described further in the next sections.

A comprehensive assessment provides a picture of a student's functional speech and language skills in relation to the ability to access the academic and/or vocational program, and to progress in the educational setting. It 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)"

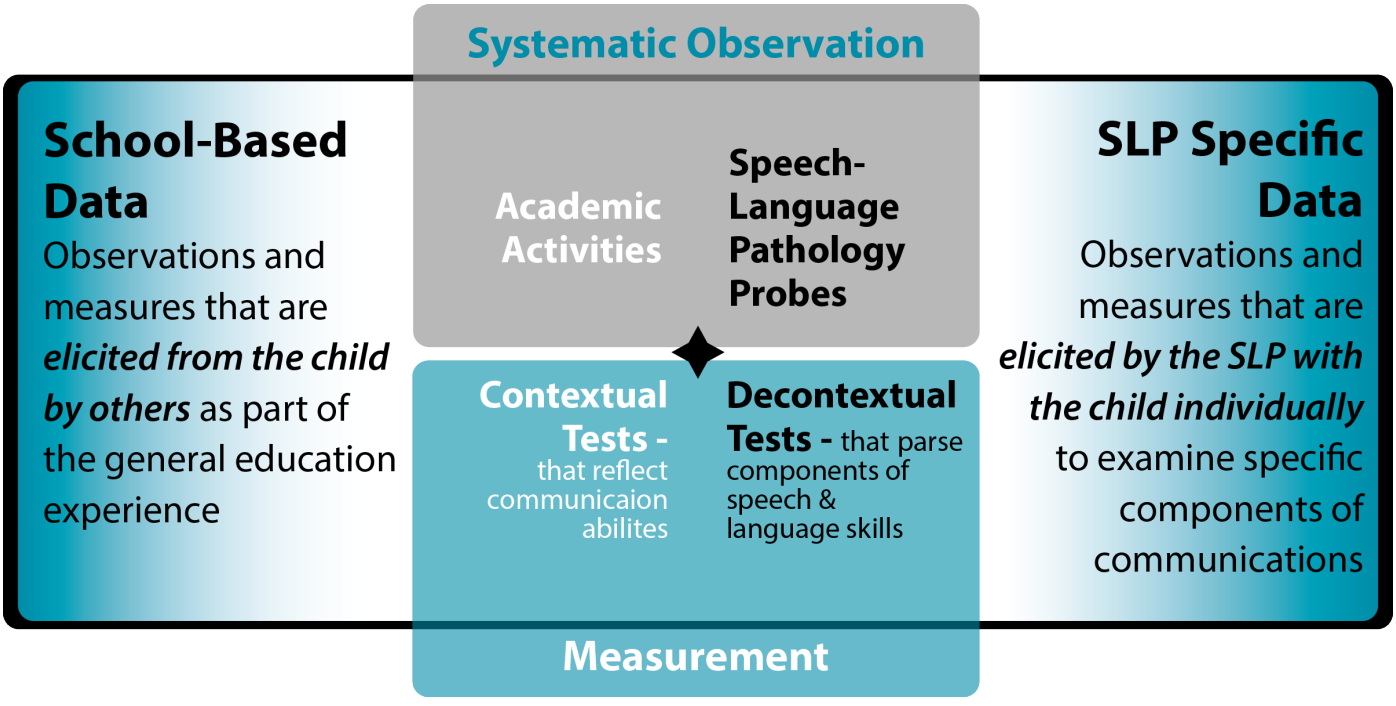
Instead, a variety of data sources should be used to gather valuable information about the student's use of his/her communication skills in school. A comprehensive speech-language assessment includes performance sampling across multiple skills, with multiple people using different procedures from varied 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 using a variety of methods completed in a variety of contexts. For preschool through high school students, a comprehensive assessment should include evaluation of discourse skills through one or more of the

following: 1) language sampling, 2) narrative sampling, and 3) assessment of students' metalinguistic/metacognitive skills. Methods of assessment for each of these three elements include criterion-based and norm-referenced measurements, observations, including in the classroom, and artifact analysis such as class worksheets and students' assignments. These assessment elements provide a baseline of performance, contribute critical information to how a student's communication skills affect his/her access to learning and the curriculum across the grades, 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 environment, a student's ability with metalinguistic and metacognitive tasks should be assessed as part of a comprehensive assessment. Additional information on meta skills is provided on pages 24-25.

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, learn to communicate effectively for needs within an academic environment, and use speech and/or language effectively to access curriculum content across all grades in an educational environment?
- What is the functional result of the student's current speech-language difficulties as demonstrated by performance in classroom activities and assignments, curriculum benchmarks, and academic testing?
- What language skills does the student need to be successful in his/her educational setting?
- What challenges does the student have in the educational environment? In what situations do they 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/her speech-language skills? How does use of these strategies affect the student's academic performance?

Figure 5. Comprehensive Assessment of School Communication Abilities



School-Based Data Collection

A comprehensive and authentic assessment with a school-age child requires substantial use of school-based information. 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 peers (not the SLP) and provide data about the child's **functional** communication abilities in the educational environment. School-based data are collected through both systematic observation and measurement.

Observations of Academic Activities

Systematic observations of school performance includes 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 across a variety of educational contexts (classes, playground, extra-curricular activities, lunch, etc.). These observations provide insight into the student's speech-language performance during real communication tasks.

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

Examining a collection of student work samples that document a student's achievement in specified areas is sometimes called ***artifact analysis.*** Student data may include classroom observations, anecdotal records, photographs, drawings, and/or work samples. Student data are not designed to compare a student to others but instead to document an individual student's current level of functioning and progress over time. Documentation of the information gathered via artifact analysis must clearly identify the tasks, the student's performance, and the student's communication strengths and deficits. Student work 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* (2006), by Rhea Paul 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 found 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 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 education 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, and
- 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 educational process for almost all students. Norm-referenced

tests are regularly or periodically administered to almost all students to systematically evaluate students' academic achievement in comparison to their peers. In addition, students are regularly assessed on their academic skills through the Virginia Standards of Learning. Sometimes these forms of measurement are referred to as "high-stakes testing" or "curriculum benchmarks." 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 participating in the education system. These measures are administered to groups of students by teachers (not SLPs) 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 vocabulary, semantic, syntactic, morphological, metalinguistic, and literacy skills. As such, these measures do not directly assess components of speech language ability but, instead, reflect student's ability to activate their language skills to support their academic performance. These contextualized tests and measures can be important sources of information about a student's academic skills and progress. As part of a comprehensive assessment, the SLP can analyze these data to document a student's use of speech-language abilities during testing completed by others (not the SLP) which supports the evaluation of **functional** communication abilities and helps to document the **educational impact** of a speech-language impairment.

Using the Standards of Learning Assessments

In order for the speech-language pathologist to adequately identify the effect of any speech-language impairment on the student's academic performance, the speech-language pathologist must have a thorough understanding of the general education curriculum. The Standards of Learning (SOL) in Virginia are the framework for the curriculum taught in each general education classroom in Virginia. These standards clearly demonstrate the need for effective communication skills, as illustrated by:

- the phonological and phonological 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, and
- the mastery of semantics in the acquisition of content-specific vocabulary in all areas.

A copy of the Standards of Learning can be found on the Virginia Department of Education Web site. Speech-language pathologists should become familiar with the grade-level curricula developed and used within their division to have a full understanding of the general curriculum requirements each student will be facing. These provide important and educationally relevant expectations to be used while developing IEPs for students.

Speech-Language Specific Data

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. 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 any variations in language use (dialect), the type and degree of speech-language impairment, and to inform the development of appropriate recommendations. Cumulatively, the data collected through systematic observation and measurement of specific speech-language skills supports a determination as to whether or not a student has a speech-language impairment, and developing recommendations accordingly. Table 6 provides a summary of the advantages and limitations of various assessment procedures.

Observation and Probes of Speech-Language Specific Skills

School SLPs complete a variety of systematic observations or standardized probes across an array of specific speech-language skills. These probes allow the SLP to fully examine a student's current level of performance in the areas of speech, language form-content-use (phonology, morphology,

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	Designed for use in natural environments such as for preschoolers' interactions with parent, and in academic environments; Can include clinician-developed probes; Useful for: analysis of quality of responses, documentation of progress over time, and developing intervention plans; Essential for determining a student's ability/inability to learn language at the same rate and "teaching" or intervention effort as same-age peers	Rarely can statistical comparison with grade or age-level peers be made; Fewer measures available; Can be standardized but may or may not be norm-referenced
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
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 (ESL/ELL, nonmainstream dialect, at-risk populations); Yield 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 available through approaches such as Systematic Analysis of Language Transcripts (SALT) and Developmental Sentence Scoring (DSS) database comparisons	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

semantics, syntax, pragmatics), hearing, voice, and fluency. These probes are completed by the SLP, who elicits and documents performance in specific facets of communication as part of a full and complete individualized assessment for which parents must provide written permission. 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, inform the development of IEP goals. However, these procedures cannot replace observations of the student's interactions with peers and teachers in real educational settings because, to some degree, interacting with an SLP to probe skills is always an artificial communication task. SLPs are extensively trained in the administration and interpretation of these highly specialized assessment strategies which 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.

A case history is essential for gathering information on the development of a student's speech-language skills, significant birth and medical, academic, and social-emotional functioning. Additionally, it provides 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/her communication skills and his/her motivation to address these skills.

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 functioning 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. A play-based assessment includes the following advantages when conducting an assessment with very young children:

- is conducted in a natural, nonthreatening environment,
- generally involves parents,
- involves several professionals so the student's skills and deficits are viewed as a complex whole and not in isolated, individual segments,
- identifies service needs, assists in developing educational plans, and evaluates progress,
- 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,
- provides a picture of a student's learning style and strengths and weaknesses, and
- is flexible and adaptive.

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

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

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	pronominal reference, cohesive devices; tense appropriateness
Language Productivity	overall length; length per unit – MLU, C-units, T-units; syntactic complexity; elaboration; morphological adequacy; lexical diversity

have standardized or nonstandardized 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 for some assessment methods is provided in Table 6.

Discourse Assessments

These probes of language skills assess ability beyond the single sentence level. Discourse assessments allow analysis of comprehension and expression across 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 explanation in Appendix B.

Language Samples

The professional literature in speech language pathology provides several best practices guidelines with regard to obtaining and analyzing valid language sampling procedures (for example, Evans & Craig, 1992; Miller, 1996) to use as a basis for eligibility decisions:

- To obtain a valid sample for analysis, elliptical responses should be minimized by avoiding 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, et al. 2005; Nippold, Hesketh, Duthie, & Mansfield, 2005). In order to use any of the several normed databases for comparing a student's language sample performance to peers, it is essential that speech-language pathologists use that same elicitation tasks and contexts as those on which the norms were developed.
- At some point in the language sampling process the speech-language pathologist must create for the student 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. Narrative sampling 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 (see next page).
- Speech-language pathologists should audio and/or video record the sample for later orthographic transcription and analysis. 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 2-4 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 speech-language pathologists use for language sampling, they should be able to explain in their reports and during eligibility meetings their decisions based on best practices and evidence from the literature.

Narrative Sampling

"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 typically produce shorter, less complete, and less elaborate narratives than their same-age, typical peers. Therefore, assessment of students' 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 speech-language pathologists use to elicit narratives from students, and each has its strengths and weaknesses and affects the characteristics of narratives students produce. Examples of these include:

1) generating a new, creative story,
2) retelling a familiar child's story (with or without the book), a favorite movie,
3) recounting some experience such as a trip to a circus,
4) 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), and
5) telling a story from a single picture (Hughes, Ratcliff, & Lehman, 1998).

Sometimes a procedural explanation task (such as explaining how to play Monopoly or baseball) is included as one aspect of narrative sampling; such a task taps a student's ability to sequence steps and organize language but does not tap a student's knowledge of story grammar. As with language sampling procedures, the selection of specific elicitation tasks depends on the purposes that a speech-language pathologist wishes to accomplish and the information about a student's abilities that he/she wants to know. Resources such as the "Guide to Narrative Language" (Hughes, McGillivray, & Schmidek, 1997) summarize many of the pros and cons of different elicitation tasks.

Types of narrative tasks with different elicitation methods can be norm-referenced or standardized criterion-based. Examples include "Bus Story" (Cowley & Glasgow, 1994), The Test of Narrative Language (Gillam, & Pearson, 2004), Systematic Analysis of Language Transcripts-Narrative Sample Scoring (Miller & Chapman, 2004). As with conversational language sampling, in order to use any of the norm-referenced or criterion-referenced databases, it is essential that speech-language pathologists use the standardized procedures.

Additional information on narrative analysis can be found in Appendix B and *The Guide to Narrative Language* (1997) by Hughes, McGillivray and Schmidek. Table 7 includes features for narrative analysis.

With regard to narrative structure such as story grammar or structure, two particular cautions are needed. One is that what is considered typical story structure/grammar of 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 a speech-language pathologist must take into consideration 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 if asked. 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 speech-language pathologists use, they need to be able to explain in their reports and during eligibility meetings their decisions based on best practices and evidence from the literature. The references cited in the discussion provide sources for speech-language pathologists 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 metapragmatics. 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, p. 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/or 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 school books) 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.

In light of 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 teachers use 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

Decontextual measures of speech-language specific skills, are the traditional form of speech-language assessment where the SLP administers norm-referenced tests to an individual student.

Norm-referenced measures usually cannot 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 take into account 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 should carefully consider statistical properties of norm-referenced tests with regard to 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 which 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

particular test to be **compared to that of their 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. However, 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 should 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 in 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 particular 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 performed poorly on tests due to limited opportunity to learn often benefit from supportive teaching and then perform better when tested

Table 8. Checklist for Reviewing Norm-Referenced Tests

Name of Test _____ Edition _____

Reviewer _____ Date _____

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

again. Responsive instruction and Response to Intervention (RtI) 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 RtI process are less likely to have impairments.

Selection and Use of Norm-referenced Tests

One challenge for the speech-language pathologist 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 review tests for possible use. The speech-language pathologist 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 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.

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 these data have not been included by the publisher, 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.[3] 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.

In order to have confidence in the outcomes of an assessment process, the speech-language pathologist must consider carefully 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 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 repeated 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), and
- internal consistency (assumes all of 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 test measures what it purports to measure. The test manual should provide detailed information as to the

3 The *Mental Measurements Yearbooks* can be located in public libraries and at the Buros Institute's Web site: *www.unl.edu/buros.*

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), and
- 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 or not 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, 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-linguistically diverse populations.

Prior to test administration, the speech-language pathologist 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 speech-language pathologist practice administering a measure at least once prior to testing a student.

Norm-referenced tests are designed for screening and assessment, not to select goals or determine progress. Therefore, norm-referenced tests should not be used to write IEP goals and objectives/benchmarks or to determine whether a student has met his or her IEP goals and objectives/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

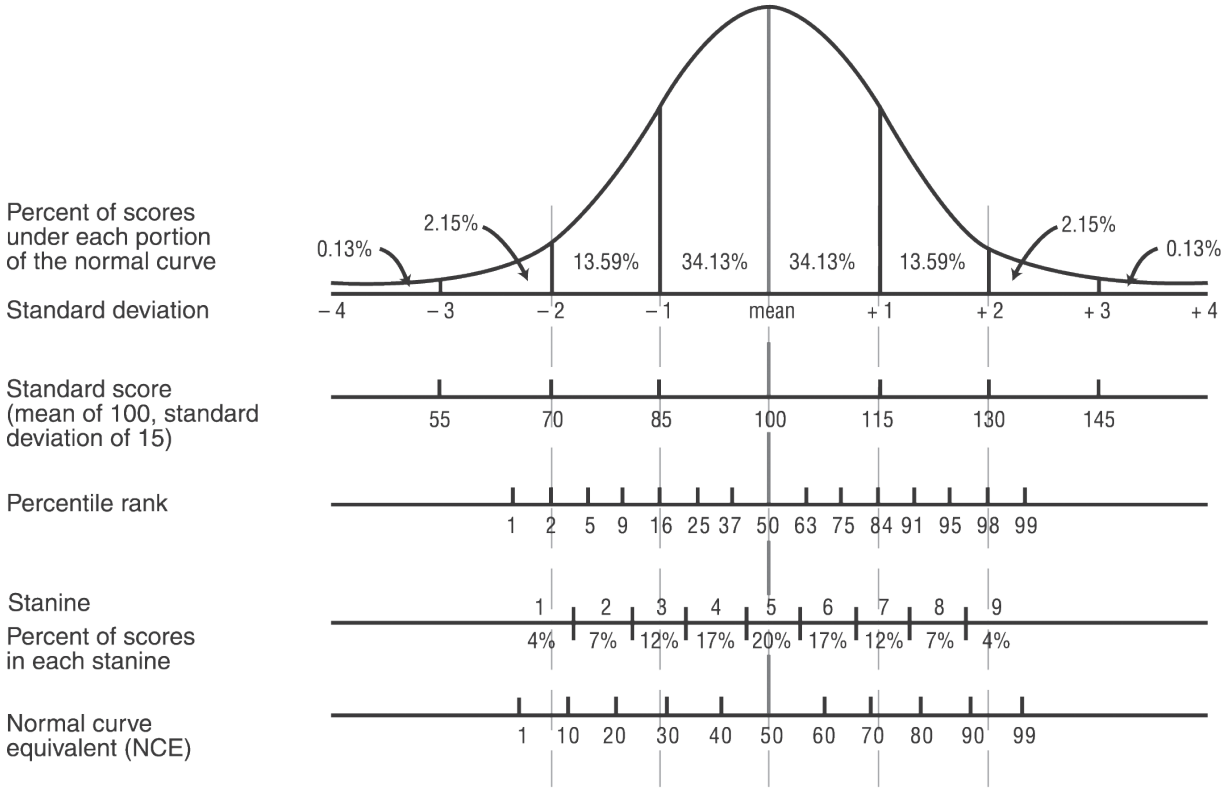
score, giving a broad range of normal performance. Consequently age-equivalent scores should not be used when determining whether the student has a speech-language impairment or to demonstrate change. **Best practice is not to report age-equivalency scores on a norm-referenced assessment.**

Students with cultural or linguistic differences, such as speakers of African-American English, may encounter content and/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 and/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 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 Virginia 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

Table 9. Normal Distribution Curve

The Normal Curve and Its Relationship to Various Derived Scores



After norms have been established, an individual's raw score can be converted to "derived scores" which communicate that individual's performance to the standardization sample. This chart shows the relationship of derived scores in a normal distribution.

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 speech-language pathologist should 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.

Speech-language pathologists 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. Table 9 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.

Table 9 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.

Interpretation of School-Based and SLP-Specific Data

When the data collection (assessment) is completed, then the information must be interpreted 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 over reliance 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) decontextual 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 not eligible for special education or for related 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 speech-language services. 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 *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

Virginia eligibility criteria require that determination of a speech-language impairment include documentation of the educational impact - how the disability affects the progress and involvement of the student in the general curriculum or for preschoolers, the effect on their ability to participate in appropriate activities. 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 the communication problem interfering with the ability of others to understand the student, peers teasing the student about his/her speech-language impairment, the student having difficulty maintaining and terminating verbal interactions, and/or the student demonstrating embarrassment and/or frustration regarding his speech-language skills. Vocational areas include job-related skills that the student cannot demonstrate due to the speech-language impairment. These include the inability to understand/follow oral directions, inappropriate responses to coworkers' or supervisors' comments, and/or 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 through the use of teacher/parent/student interview checklists. These would enable a comparison of the student's speech-language skills and needs in his/her two most natural environments: home and school (see Appendix E for sample checklists). The Functional Communication Assessment Summary included in Appendix D 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 Speech-Language Pathologist's Evaluation Report

The speech language pathology 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 his/her 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, auditory processing 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 discussion. When professional terminology is used, it should be clearly defined (e.g., "phoneme" could be defined with the layperson's phrase "speech sound").

Comprehensive Assessment System

This document includes a Comprehensive Assessment System and summary forms in speech production, language, fluency, voice, and functional communication. These forms are designed to describe a student's speech-language impairment, based on assessment using multiple sources of data and considering multiple aspects of communication. This system provides 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 system; each division will set its own policy regarding its use. Appendix D includes summary forms for speech production, language, voice, fluency, and functional communication.

Attainment of a certain level of impact on a summary form does not guarantee eligibility for special education; rather, it describes the results of the comprehensive speech-language assessment in consistent terms. The eligibility committee considers the summary of data in conjunction with Virginia eligibility criteria and other information as the team determines eligibility.

A particular level of impact does not specify or predict a certain level of service. The level of service is determined by the goals and any objectives or benchmarks specified by the IEP team.

The Comprehensive Assessment System emphasizes the use of academic activities and measures along with SLP 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 D for the Comprehensive Assessment System.

Special Education

In Virginia, educators and families must follow specific steps in the special education process required by federal law, Virginia special education regulations, and local policies and procedures. The VDOE publication, Guidance on Evaluation and Eligibility for the Special Education Process, provides information on each step in the special education process, documentation requirements, and additional information on other factors to consider. To assist parents in understanding this process, the *Parent's Guide to Special Education*, published by the VDOE, provides information on the special education process and specific information for parents.

The following sections provide information on steps of the special education process including:

- Student screening
- The special education process from referral to eligibility
- Related services
- IEP development, and
- Students in private schools.

When appropriate, specific information pertaining to students with speech-language impairments and the role of the speech-language pathologist is provided. For general information on special education, the steps in the process, timelines, regulatory and documentation requirements access the VDOE Web site (*www.doe.virginia.gov*), the Parent's Guide to Special Education, or the Guidance on Evaluation and Eligibility for the Special Education Process.

Students that receive speech-language services in Virginia public schools have been found eligible using the criteria for speech-language impairment or their IEP team has determined that they require speech-language services as a related service.

Child Find Screening

As part of the child find requirements of special education and public health policy, screenings are conducted in public schools to identify students who may need a special education evaluation or a referral to medical personnel. In 2009, changes were made to Virginia special education regulations including changes to the screening requirements. Information about these current requirements is available in the VDOE publication Resource Document for Local Screening Requirements in Virginia's Public Schools.

The *Virginia Special Education Regulations* do not specify the qualification requirements of personnel who provide screenings. The school division is responsible for assigning personnel who are appropriately qualified to ensure that the results are valid and reliable. The School Health Guidelines, jointly prepared by the Virginia Departments of Education and Health, include detailed information about mass screenings, including recommended screening protocols, can be found at the Virginia Department of Education Web site.

Speech, voice, and language screenings are completed according to locally developed procedures and timelines. The qualifications for the individuals providing the screening are also locally developed. School speech-language pathologists are encouraged to become familiar with school divisions procedures, timelines, and screening instruments and provide input to ensure screening tools align with current evidence for speech sound and language development.

Speech-language screenings should be conducted using screening tools that meet the needs of the target population. Commercially available screening instruments should be reviewed to ensure their reliability and validity with the target screening population. Items that are unfamiliar to the general student population, that require knowledge or experience with mainstream culture, or that have a high level of language proficiency associated with them may result in more student failures during screening.

Screenings may be completed through collaboration with classroom teachers, who are an excellent source of data regarding the status of their students' communication skills. An efficient and accurate method of screening is to capture the classroom teacher's information as the initial screening. For example, teachers can complete a 10-item screening questionnaire about each student's communication skills (see Appendix E). If no concerns are noted on the teacher's screening, the student is considered to pass the speech-language screening. Students may also be screened by trained volunteers. Any student with one or more errors may be rescreened by the speech-language pathologist.

If the original screening is conducted by a teacher or volunteer, students who fail the screening are often rescreened by the speech-language pathologist for speech-language screenings and the audiologist, school nurse, or speech-language pathologist for hearing screenings. The regulations specify that students "may be rescreened if the original results are not considered valid."

When a student fails a screening, the individual conducting the screening must determine if there is a suspicion of a disability or another reason for the failure, such as a lack of experience in a structured setting, limited English proficiency, etc. Parents must be notified of screening results and the action that will be taken. Actions may include no further action, referral to a school team or other agency for follow

up, or referral for special education evaluation.

Special Education Overview

The special education process is governed by federal and state regulations and local policies. There are documentation requirements for each step of the process. SLPs are encouraged to attend local trainings on special education matters and become familiar with steps in the process and requirements. Additional information on the special education process is available online at ***www.doe.virginia.gov*** and in documents including the Regulations Governing Special Education Programs for Students with Disabilities (2010) and A Parent's Guide To Special Education. Figure 6 illustrates the steps in the special education process.

Referral for Special Education Evaluation

When parents, school staff, or outside sources, suspect a disability because a student is having difficulty in speech and/or language skill development, they may express their concerns to school personnel. The concerns do not need to be in writing. After the school is alerted to the concern, the special education administrator, or designee, records the date, reason for referral, and name of the person making the referral, provides the parent with a procedural safeguards notice, and ensures that confidentiality of information is maintained. Comprehensive information on the referral process is available in Guidance on Evaluation and Eligibility for the Special Education Process.

Evaluation and Eligibility for Special Education and Related Services

Whenever a student is being evaluated for speech-language concerns, one team member must be a speech-language pathologist. After review of existing information if additional information is needed, the team will identify the needed information and obtain parental consent to conduct the evaluation. The team may decide it has sufficient information to make the necessary decisions. If so, the team's review of data is considered the evaluation and no further testing is required prior to meeting to determine eligibility.

Eligibility for services is based on the presence of a disability that results in the student's need for special education and related services, not on the possible benefit from speech-language services. The speech-language pathologist and team members must be able to document the student meets criteria for the disability category of Speech-Language Impairment including the adverse educational impact of a student's speech and language skills on performance. A student can demonstrate communication differences, delays, or even impairments, without demonstrating an adverse affect on educational performance. Specific criteria for speech-language impairment must be met before a child can be found eligible as a child with a disability with a speech-language impairment (8 VAC 20-81-80 U). The sample form, that uses Virginia criteria for determination of a speech-language impairment, is shown in Figure 7. When a student does not meet the criteria for eligibility as a student with a speech language impairment, the IEP team may determine that speech or language therapy is required as a related service.

Figure 6. Steps in the Special Education Process

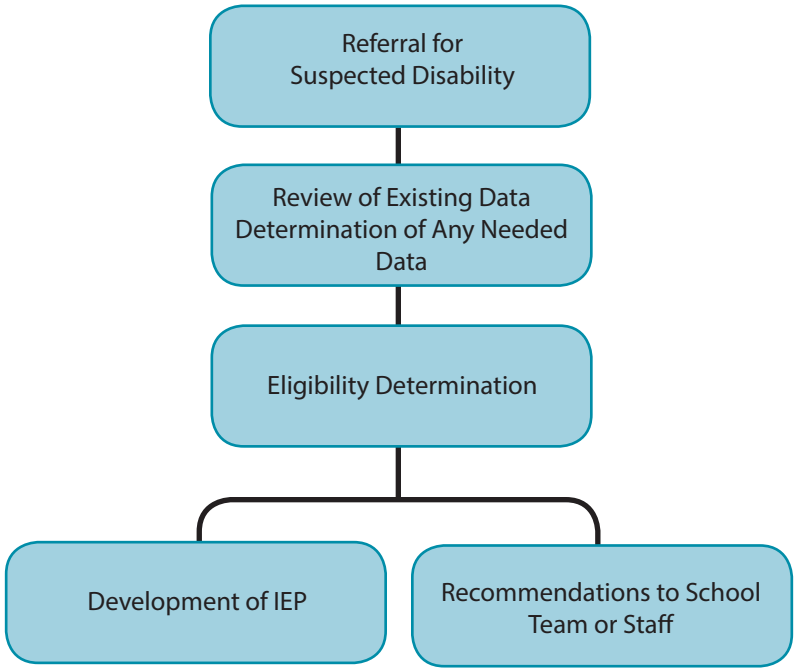


Figure 7. SLI Criteria Worksheet

Speech-Language Impairment Worksheet

Name: _____ School: _____ Meeting Date: _____

Student ID: _____ D.O.B. _____ Age: _____ Grade: _____

In application of the Virginia Department of Education's *Regulations Governing Special Education Programs for Children with Disabilities in Virginia*, this worksheet may assist the eligibility group in applying criteria for students who are being considered for eligibility under the category of Speech-Language Impairment. Review the definition, consider the items below, and note any additional information. Attach this worksheet to the Eligibility Summary Form and include any necessary documentation.

STEP 1. **DEFINITION:** "Speech-Language Impairment" means a communication disorder, such as dysfluency (stuttering), impaired articulation, expressive or receptive language impairment or a voice impairment that adversely affects a child's educational performance.

STEP 2. There is documentation of a significant discrepancy from typical communication skills in one of the areas below (check all that apply):

- ❑ Fluency
- ❑ Receptive or expressive language
- ❑ Articulation
- ❑ Voice

List and/or describe: _____

_____

_____

_____

AND STEP 3. The student does not demonstrate Limited English Proficiency (LEP) and/or is not a speaker of a sociocultural dialect that is the primary reason for the speech-language impairment.

AND STEP 4. There is documentation of an adverse effect on educational performance due to one or more documented characteristics of Speech-Language Impairment.

List and/or describe: _____

_____

_____

_____

AND STEP 5. Due to the identified Speech-Language Impairment, the student needs specially designed instruction.

The evaluation must be completed and the student's eligibility determined within 65 business days of the date the referral is received (8VAC20-81-80). Comprehensive information on the review of existing data and determination of needed data is available in Guidance on Evaluation and Eligibility for the Special Education Process.

Related Services

A student must be found eligible for special education to receive related services. Speech-language pathology services are considered both special education and a related service in Virginia. When determining the need for a related service, it is important to remember that the federal definition of related service means a service required to assist a child with a disability to benefit from special education (34 CFR 300.24). For example, it is not likely that a student with a speech-language impairment will need physical therapy as a related service to work on balance when the student is receiving therapy for articulation issues. Local procedures may provide additional information or requirements for IEP teams.

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 intellectual disabilities may not meet the Virginia eligibility criteria for SLI due to the communication difficulties being an inherent component of the primary disability. However, this same student may still require speech-language as a related service to address documented needs in order to benefit from their special education program. When a student is eligible for special education, the IEP team may make decisions regarding the need for related services. It is not necessary to reconvene the eligibility committee, unless required by local procedures.

Students Not Eligible For Special Education and Related Services

Students who do not meet the criteria for speech-language impairment are not eligible for special education with an identification of speech-language impairment (SLI). The *Virginia Special Education Regulations* require whenever a student is found ineligible for services, the eligibility committee should prepare useful information for the classroom teacher and the parent about steps they can take to facilitate the student's development.

Students with another disability identification, such as autism or hearing impairment, may receive speech services as a related service if determined necessary by the IEP team.

When the speech-language pathologist, or anyone with a legitimate educational interest in the student, perceives that the student no longer requires speech-language services to benefit from special or general education programs, the IEP team must reconvene to discuss the possible change in eligibility. If speech-language services are provided as a related service and SLI is not an identified disability area, the IEP team can determine if continued services are required.

IEP Development

When the eligibility committee 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 an IEP is to describe the special education and related services that are necessary to meet the unique educational needs of the student, as identified by the assessment. The IEP should address where the student is currently functioning, what the goals are for the student, and what services and supports will be provided to reach the target.

The IEP team is a multidisciplinary team that includes the parents. The speech-language pathologist must be a member of the team for any student with a speech-language impairment. IEPs are developed using local forms that contain all components required by regulations. In Virginia, parental consent must be secured prior to implementing any proposed IEP.

Sample state forms are available online at www.doe.virginia.gov. A sample checklist including components of the IEP are provided in Table 10. This checklist may be useful at staff in-service meetings, when reviewing IEPs, and for identifying methods for improving the quality of the IEP.

The IEP team considers the following factors: the strengths of the child; the concerns of the parents for enhancing their child's education; the results of the most recent evaluations; and the child's performance on any state or divisionwide assessments. The IEP team must also consider:

- the results of the evaluation, strengths of the student, and academic, developmental, and functional needs;
- the concerns of the parent;
- the student's communication needs and assistive technology device(s) and service(s) needs;
- the need for short-term objectives and benchmarks;

Table 10. IEP Components

IEP Component	Description	Sources of Information
Present Level of Academic Achievement and Functional Performance	How the student's disability affects his/her involvement and progress in the general curriculum and in the areas of need. Strengths and weaknesses of the student	Performance on assessments of academic **and** functional performance, parent input and student input For students 14 years of age and older, should contain the preferences and needs of the individual as well as age appropriate transition assessments
Goals and Short-Term Objectives or Benchmarks	A measureable description of what we want the student to be able to do in a year	Developed from the information in the PLOP (Present Level of Performance)
Accommodations	Supports used in instruction and assessment that do not change the learning expectations	Present Level of Performance
Assessment	A description of the student's participation in Virginia's statewide assessment program	Based on IEP student performance and participation criteria for state assessments
Modifications	Supports that change learning expectations	Based on IEP, student's needs, and supports
Placement	Where the student will be educated (LRE)	Based on IEP, student's needs, and supports
Postsecondary Goals	Measurable postsecondary goals describing what the student is planning to do beyond school. Must address at least one goal in the areas involved in postsecondary employment: training, education, living and community participation.	Age appropriate transition assessments
Transition Plan	Should be considered for all students 14 years of age or younger if appropriate. Should include statements regarding: transition service needs that focus on the child's high school course of study and for the student to achieve employment, postsecondary training, education or independent living goals.	Postsecondary Goals, plus age appropriate transition assessments
Services	Written after the goals are established May include related services, supplementary aids and services, program modifications, and accommodations and modifications in instruction and assessment.	Assessments regarding the needs of the child in relation to participation in the general education curriculum, extracurricular and nonacademic activities and to be educated and participate with children without disabilities.

- for a student whose behavior impedes his or her learning or that of others, when appropriate, strategies including 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;
- the language and communication needs for a student who is deaf or hard of hearing, including opportunities for direct communication with peers and professional personnel in the student's language and communication mode and the need for direct instruction in the student's language or communication mode.

Present Level of Educational and Functional Performance

The present level of educational and functional performance serves to identify the 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/her involvement and progress in the general curriculum and in the area(s) of need. This will include the student's performance in academic areas (e.g., reading, mathematics, science, social studies) and functional areas (e.g., communication, behavior, social skills, self-determination). The present level of educational and functional performance should be written in language understandable to all participants (i.e., avoid or explain professional jargon) and in objective terms. Test scores, if appropriate, should be self-explanatory or an explanation should be included. For preschool students, the present level of educational and functional performance should include how the student's disability affects his/her participation in activities appropriate for preschoolers. See Table 11 for a checklist of components of a present level of educational and functional performance.

Sources of information should include data from all four assessment areas. Data from formal tests, informal tests, observations, anecdotal reports, curriculum-based assessments, interviews, and checklists may be included. It is also helpful to consider the future, specifically, the student's aspirations in one year, three years, or a longer period of time. The use of teacher/parent/student checklists is recommended to ensure that all perspectives are included. Sample forms can be found in Appendix E.

The present level of educational and functional performance 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.

Annual Measureable Goals

Annual measurable goals to be addressed for the duration of the IEP must be developed from the information reported in the present level of educational and functional performance. Goals are 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 goal 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 and prioritized, and written in measurable terms that clearly state the skill or behavior to be achieved, the level of independence and or accuracy, and the time frame for meeting the goal. It is also important to include information on how the skill or behavior will be measured, under what circumstances or where the student will use the behavior.

Benchmarks are considered milestones to the annual goal that are set at regular increments of time during the year, providing a marker to gauge student progress. Short-term objectives 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. Benchmarks or objectives are required for students who will be assessed using alternate achievement standards (The Virginia Alternate Assessment Program [VAAP]). Benchmarks or objectives are not required for students not participating in the VAAP, but may be required by divisions.

Accommodations, Modifications, and Supports for School Personnel

Accommodations are supports that provide equitable instructional and assessment access for students with disabilities. Accommodations are generally provided in the areas of presentation of instruction, the equipment and materials needed by the student, the way in which the student will respond, the setting in which instruction or learning will take place, and the time it will take. Modifications are supports that change, reduce, or raise learning or assessment expectations. Supports for school personnel may be used to describe the supports provided to school staff which are required for the student to be provided FAPE. Examples of supports for school personnel may include training

Table 11. IEP Checklist

Present Level of Performance

Yes	No	Does the present level of performance statement identify the child's strengths, especially in each problem area (i.e., what the student is able to do)?
Yes	No	Does it address the child's needs/weaknesses in each area of need (i.e., what the student is not able to do)?
Yes	No	Is it based on the most recent information gathered from comprehensive assessment (school-based and SLP specific data gathered through systematic observation and measurement)?
Yes	No	Are the sources of data identified, including dates and methods?
Yes	No	Does it document the child's performance in the general curriculum?
Yes	No	Does it document the child's communication needs?
Yes	No	Are instructional needs identified?
Yes	No	For a child whose behavior impedes his/her or other's learning, does it address behavior?
Yes	No	For a child with limited English proficiency, does it consider the child's language needs?
Yes	No	Is it written using language that can be understood by both professionals and parents?

Annual Goals and Benchmarks or Short-Term Objectives

Yes	No	Are the goals relevant to the student's academic, social, and vocational needs?
Yes	No	Are the goals practical considering the student's age and remaining years in school?
Yes	No	Is there at least one goal for each area of need identified in the Present Level of Performance?
Yes	No	Are the goals stated using positive terms and indicate what the student will achieve?
Yes	No	Does it identify who will achieve?
Yes	No	Does it identify what skill or behavior is to be achieved?
Yes	No	Does it identify how or in what manner or at what level the skill or behavior is to be achieved?
Yes	No	Does it identify where, in what setting, or under what conditions the skill or behavior will be achieved?
Yes	No	Does it identify when or by what time, the skill or behavior will be achieved? Should be no longer than 1 year.
Yes	No	Is educational jargon avoided?

Accommodations, Modifications and Supports for School Personnel

Yes	No	Are accommodations and modifications related to the needs identified in the present level of performance?
Yes	No	Are any needed supports for school personnel listed (e.g., training on AAC equipment, consultation with teachers, etc.)?

State Assessments, Transition, and Diploma Status

Yes	No	Are assessment and diploma options coordinated with course of study?
Yes	No	Are postsecondary goals included for education, training, employment, and independent living?
Yes	No	If appropriate, are outside agency service providers involved?

Services

Yes	No	Are services based on needs documented in the present level of educational performance and goals written for the student?
Yes	No	Are services written to permit changes in setting or session length (e.g., 2 hours /month instead of 30 minutes per week)?

on specific disability characteristics, in-service on use of assistive technology or student equipment, or ongoing consultation with teachers.

IEP teams should carefully consider adding supports that may reduce the rigor of the student's educational program and potentially cause an adverse effect on learning. These supports must be directly related to the student's disability and can be provided in the general and special education setting.

Participation in State Assessments

The section of the IEP addressing state assessments shall be completed for all students enrolled in a grade level requiring an assessment. Any accommodations used on state assessments must be the same as those used in instruction and assessment during the year. These accommodations should reflect the student's disabilities and needs to access the general curriculum. See the Virginia Department of Education Web page on Testing and Standards of Learning Participation and Inclusion for documents such as Guidelines for Participation of Students with Disabilities in the Assessment Component of the State's Accountability System for more information about the state assessment system and the standard and nonstandard accommodations that can be used.

Transition and Diploma Status

Prior to a student entering secondary school, but not later than the first IEP to be in effect when the student turns 14, or younger if determined appropriate by the IEP team, the IEP must include:

1) Measureable postsecondary goals related to education, training, employment, and where appropriate, independent living. These goals are based upon appropriate assessments and take into consideration the student's strengths, preferences, and interests.
2) Transition services, including the courses of study needed to assist the student in reaching his or her stated postsecondary goals. Services are based on the student's needs.

Beginning not 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 a statement of interagency responsibilities or any linkages.

For a student pursuing a modified standard diploma, the IEP team must consider the student's need for occupational readiness upon school completion, including consideration of courses to prepare the student as a career and technical education program completer.

At least one year prior to the student reaching the age of majority (age 18), the students and parent(s) or guardian(s) must be informed of the rights that will transfer to the student when he/she reaches eighteen. The adult student is presumed, under Virginia law, to be capable of making his/her own decisions, including educational decisions. Only if it is proven that the adult student is not capable of providing informed consent when making decisions can another person be appointed to make decisions for the adult student. Most students will be part of the decision making process and seek guidance from their parent(s)/guardian(s). Ideally, planning and decision making are collaborative and involve all parties regardless of the student's age. VDOE's technical assistance document "Transfer of Rights for Students with Disabilities upon Reaching the Age of Majority in Virginia" and other information on secondary transition is available on the Virginia Department of Education Web site at *www.doe.virginia.gov*.

Postsecondary Outcomes

The very first step in purposeful planning for positive postsecondary outcomes is helping the family and student create a vision for life after high school. This vision is defined or described through the postsecondary goals which are based upon age appropriate transition assessments. The planned supports, activities, services, and agency linkages are written into the transition IEP to facilitate the student's movement to his/her post-graduation goals. Effective transition planning will lead to maximum independence and positive post-graduation outcomes when planning and services delivery are viewed as a shared responsibility among all involved including the student, school, family and community agencies.

Transition to Post High School

If a student is graduating with a standard or advanced studies diploma, the parent must receive prior written notice of the change in placement (i.e., the end of services per the IEP due to graduation). If the student is receiving a modified diploma, the option for extended services (through to age 21) under Part B of IDEA is available. When deemed appropriate per the IEP team, a student may qualify for school-based special education services through age 21.

Services

The IEP team's discussion of supports and services should be completed after the goals are written. Services are selected based on the needs of the student and the educational support needed for him or her to: meet annual goals, be involved

in and progress in the general curriculum, participate in extracurricular and nonacademic activities, and be educated and participate with students without disabilities. The services section may include related services; supplementary aids and services for the student, or those provided to school personnel on behalf of the student; program modifications; and accommodations and modifications in instruction and assessment. The services section shall 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 class(es), as well as extracurricular and nonacademic activities. Services should be provided in the least restrictive environment. Prescriptions and reports from outside providers must be considered by the IEP team, but are not required to be followed.

The speech-language pathologist and other staff may develop a draft IEP. For specific details on this process, the speech-language pathologist must consult the local procedures for developing IEPs, convening IEP meetings, and implementing IEPs. When the IEP has been written and parental consent has been obtained for implementation, the speech-language pathologist must initiate services by the beginning date noted in the IEP.

Each IEP must be reviewed and revised at least annually. During this review, the IEP team addresses the student's progress (or lack of progress) toward meeting the annual goals, the results of any re-evaluation, information provided by the parents, the student's anticipated needs, and any other matters. 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.

If a standardized assessment will be used to measure progress and it was not specifically referenced on the IEP, parental consent must be secured to complete the evaluation.

IEP revisions may include changes to the special education services, the related services, the goals, any short-term objectives or benchmarks, the accommodations or modifications, and supplementary aids and services. In addition, the IEP team may add or terminate a related service.

Reporting Progress

IDEA requires IEPs to contain a statement regarding how the student's progress toward annual goals will be measured and when periodic reports on progress will be provided. Speech-language pathologists follow local procedures and timelines for reporting progress. Progress must be reported for each annual goal indicated in the student's IEP. "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 use of norm-referenced tests to report progress is discouraged.**

If services have been provided to address a particular IEP goal during the reporting period, but the student has not made progress, the IEP committee must reconvene. The IEP committee must determine if the goal needs to be modified or if other aspects of the special education and related services need to be changed to facilitate the student's mastery of the current goal for which there has been "no progress." Methods of measuring progress are noted in the student's IEP and all notations of progress should be based on actual performance data collected over the reporting period. Parents may request an explanation of the data used to document progress, or the lack thereof (e.g., a percentage of accuracy).
Some children demonstrate little if any progress for a period of time, prompting educators to consider dismissing the child from services due to 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. Any decision to dismiss a child who continues to have a speech-language impairment and who is not making progress must occur after an IEP team has reviewed the child's progress and pursued a variety of options for achieving progress. Those options should include 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 develop a joint effort to address motivation (e.g., working with the school social worker, guidance counselors, or teachers).

If the lack of progress is not related to any of the above, the IEP team should consider whether further evaluation may 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.

Re-evaluation

If the student is identified with a speech-language impairment, regulations require school divisions conduct an evaluation at least once every three years to determine if the student continues to be "a child with a disability." This evaluation includes a review of existing data and may include additional information if determined necessary by the team. Reviews may be conducted more frequently if requested by the team. If the student is receiving speech language services as a related service, determinations for continued need for services may be made by the IEP team. Evaluation is not required before termination of eligibility due to graduation with a standard or advanced studies high school diploma or before reaching the age of 22.

The decision to dismiss is based on the same criteria as the decision to find the 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 child no longer has a speech-language impairment;
- The child continues to have a speech-language impairment, but it no longer affects his/her educational performance;
- The child continues to have a speech-language impairment that affects his/her educational performance, but the eligibility committee determines the child does not need specially designed instruction; or
- The IEP team determines the child no longer needs speech-language related services to benefit from special education. For example, the child's communication needs can be met through the communication goals worked on in the regular or special education classroom.

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. Audio or video recordings may be valuable ways to demonstrate student progress. If additional information is required, parental consent for testing must be obtained prior to administration of the assessment unless that particular instrument was already noted in the student's IEP as a means of measuring progress. The Comprehensive Assessment System tools, included in Appendix D, may also be helpful in determining progress.

Review of Need for Related Services

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. The IEP team then determines if the information is sufficient to find the student in need of continued speech-language services.

Termination of Services

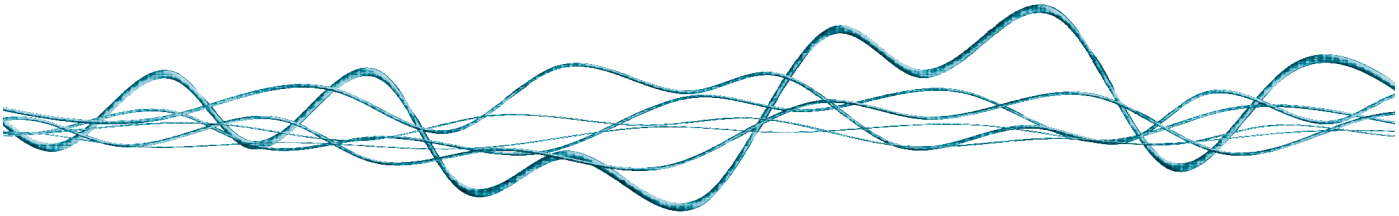
If an IEP or eligibility team decides that the related service is no longer needed, the division must secure parental consent to terminate services. If the parent does not agree with the recommendation, other courses of action must be considered. Further discussions with the IEP team, mediation, or a due process hearing may become appropriate depending on the individual case. The speech-language pathologist must refer to their school division's local policies. However, the speech-language services must not be discontinued until parental consent is obtained or the matter has been resolved by other means.

Transitions from Early Intervention

Children from birth to three years of age may qualify for Early Intervention (EI) services. In Virginia, the Infant & Toddler Connection provides these services in different regions across the state. Specific information regarding these services and the specific service areas can be found online at www.infantva.org/. A child is determined eligible for EI services when he/she meets at least one of the following criteria:

- developmental delay – a documented 25% or greater delay in functioning in at least one area of development
- atypical development
- a diagnosed physical or mental condition that has a high probability of resulting in a developmental delay

EI services typically follow a coaching style model; this evidence-based approach fully involves the family and caregivers within the home environment and/or community, empowering them to utilize appropriate strategies to assist with improving the child's skills within his/her daily routines. The Infant and Family Service Plan (IFSP) is the guiding treatment document in EI. Similar to an IEP, the IFSP outlines the following



information: child and family activities and daily routines; family identified resources, priorities and concerns; a social assessment which reviews the child's present level of functioning; a narrative of the team evaluation; specific long-term and short-term goals; suggested learning opportunities and activities for the family; information regarding the provider, type and frequency of service; and early transition planning. EI services cannot persist beyond the child's third birthday.

When a child moves from early intervention (EI) to school-based services, he/she shifts from Part C to Part B of IDEA. In Virginia, this transition process can occur as early as two years of age, as long as the child is two on or before September 30th of that school year. If the family chooses to pursue school-based services prior to the child's third birthday, once he/she is determined eligible for treatment, the home-based EI services must end prior to implementation of an IEP.

When a child is transitioning from EI to the public schools, the first step is to refer the child to the school division to determine if the child is eligible using Virginia's criteria and eligibility process. If the child is found to be eligible for special education and related services, then the IEP team must consider the content of the 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 and appropriate public education. It is also suggested that the school team consult with the EI service providers to communicate regarding present level of performance and functional needs. The child's parent has the right to request that the Part C service coordinator, as well as other professionals involved in treatment, be invited to the initial meetings (e.g., referral, eligibility, IEP).

Private School Students with Disabilities

The reauthorization of IDEA in 1997 and 2004 significantly altered the rights of children placed in private schools by their parents when there is no disagreement about special education services. These are students whose parents prefer private education to public education, often placing their children in parochial or other private schools. In Virginia, children who are home-schooled are treated as children who attend private schools.

(This section does not address children placed in private schools by the school division or children placed there by their parents when they disagree with the school division about the provision of a free appropriate public education for their children. The speech-language pathologist should refer to school division policies for addressing such situations.)

The *Regulations Governing Special Education Programs for Children with Disabilities in Virginia* require each school division to locate, identify, and evaluate all private school children enrolled in private schools (including preschools) located in the division, as well as home-schooled children residing in the division. Upon completion of the evaluation, the eligibility committee determines whether the child is a child with a disability. If the determination is made that the student has a disability and requires special education, the student may be entitled to receive certain services from the school division.[4]

To maintain best practice, the Virginia Department of Education recommends that, once a parentally-placed private school student has been found eligible for special education and related services, the school division of residence develops and proposes an IEP. The proposed IEP provides documentation that the school division stands ready, willing and available to provide a free appropriate public education if the parent elects to enroll the student in the public school. In any case, a parentally-placed private school student may be entitled to receive certain services under an "Individualized Services Plan" or "ISP."

However, the rights of these children to receive special education services are limited. Each school division must develop a plan for how it will serve these children according to a federal funding formula. This plan will address the type of service, location of the service, and transportation (if applicable) the school division will provide the student. Regardless of the type of service needs that are identified by the evaluation, the child is only entitled to receive those services identified in the school division's plan, meaning that the child does not have an entitlement to a free appropriate public education.

The ISP does not require the same amount or type of services provided to public school students. It may exclude those sections that are not relevant based on the division's plan for serving private school children. For example, if the division plan does not include a particular related service, such as occupational therapy, the division is not obligated to include that particular service in the student's ISP.

4 Students in certain schools (those that are "for profit" or do not meet the definition of "elementary" or "secondary" school under the Virginia Regulations may not be eligible for services under the applicable regulations. This issue is complex and beyond the scope of this document. SLPs should consult with LEA staff to determine how these rules apply to a specific student's situation.

Service Delivery

Students eligible for special education and related services should receive intervention from school-based speech-language pathologists that is:

- curriculum-based,
- outcome-oriented,
- integrated with educational activities,
- diagnostic in nature,
- dynamic, changing as the child's needs change,
- based on research-proven strategies, and
- designed to ensure access to the general curriculum so the child can be successful in mastering the Standards of Learning.

IDEA 2004 directed educators to focus on access to the general curriculum for all students. SLPs should select a service delivery approach for each student, and may use a combination of approaches for the student during the intervention process. A comprehensive intervention program that supports students' involvement in academic, nonacademic, and extracurricular programs is necessary to meet students' needs. Regardless of approach(es), intervention that utilizes curricular materials or activities facilitate the language abilities of students, including promotion of metalinguistic and metacognitive skills essential to academic success. This may be effectively provided in classroom settings, frequently working alongside the classroom teacher (or sometimes a resource room teacher) in collaborative or co-teaching roles. Although speech-language pathologists 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 collaborative consultation with the teachers and 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, focusing solely on discrete speech or language skills, is no longer sufficient for all students.

Speech-language pathologists must use evidence-based practice in their service delivery. Evidenced-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 Evidence-Based Practices. 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 particular 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 the students. Service delivery approaches are selected on the basis of the needs of a specific student and include a variety of methods at different times, including those that may be provided directly to the student in the classroom or less frequently on a short-term basis in pull-out setting or indirectly through consultation with educators and families. 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 to date, 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

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 intervention room or other school settings). The type, location, and amount of services are adjusted to meet the needs of the student. Whenever possible, intervention should be provided in the least restrictive setting and result in the least amount of disruption to the student's academic day.

Integrated or Push-In Therapy

Therapy integrated into the classroom provides individualized service in a less restrictive setting 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 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 the students with speech-language impairment as well as general education students. This incidental benefit to regular 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 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 jointly plan, teach, and assess the student's progress within the classroom setting. Integrated therapy can involve several approaches to sharing instruction. Throughout the academic week, the teacher may then choose to employ strategies learned, use prompts or cues the speech-language pathologist 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 and classroom teacher may present instructional materials collaboratively. With the speech-language pathologist's assistance, these instructional materials and activities can focus on the speech-language objectives of the students receiving speech-language services. The speech-language pathologist 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 may work with individual students, small groups, or with the entire class. Table 12 provides examples of teaching models for integrated therapy. 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. It is important to note that 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.

Therapy provided in the classroom provides many benefits for students and staff. Because of the SLP's unique professional preparation in the area of language development and language impairment, the SLP 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 has the potential for generalized benefits to the whole class.

Pull-Out Therapy

Sometimes the nature and severity of the speech-language impairment may necessitate service delivery in a pull-out situation. 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.

Table 12. Teaching Models for Integrated Therapy in the Classroom

Team Teaching	Small Group Instruction
The speech-language pathologist: • 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.	The speech-language pathologist: • works in small group instruction with targeted students, reviewing academic material • presents the academic material with a focus on enabling the student to generalize his/her communication skills

Indirect Services

Indirect services, or consultative services, are provided when a student's IEP specifies support for school personnel as a part of the accommodations, modifications, or supplemental support services provided to a teacher on behalf of the student. These services include providing information and demonstrating effective instructional and facilitation procedures. The speech-language pathologist may provide support for staff or analyze, adapt, modify, and create instructional materials and assistive technology for targeted students. While providing consultative services on behalf of a child, the speech-language pathologist will monitor the student's progress. Consultative services may also be characterized as indirect services on the student's IEP.

This model is appropriate for students who are nearing dismissal from speech-language services or students whose teachers require additional support to create materials, implement specific communication strategies, or modify augmentative/alternative communication (AAC) equipment. The classroom teachers may request assistance as they plan, monitor student progress, or make decisions regarding the presentation or selection of materials.

Consultative services may be provided to family members. Such consultation can include information on speech-language development and facilitation, home programs, recommended environmental changes, or parent-support groups. This level of service may be provided to a family member of a child who is receiving services or a child who is not eligible for services to support recommendations by the eligibility group. Information, home programs, and demonstration that can positively impact communication development or maintenance skills may be offered. This type of support is especially valuable for families and teachers when there is concern about the child's development.

Other Service Delivery Methods

Combined Direct and Indirect Services Using a 3:1 Model

The 3:1 model combines three weeks of direct intervention with students and one week of indirect services. With this model, three weeks out of each month are designated for direct intervention with students, and one week for indirect services, such as meeting with teachers, parents, and other specialists; and developing treatment materials.

During the time designated for indirect intervention for students, the SLP provides services that address individual student needs. These services may include:

- Conducting and attending meetings
- Performing evaluations
- Conducting training and consultations with staff and parents
- Visiting classrooms and conducting systematic observations
- Developing and adapting classroom and intervention materials

The 3:1 model provides opportunities for SLPs to consult with teachers about students' needs in the classroom, address curriculum pacing, and integrate speech-language goals and classroom curriculum. This service delivery model is supported by the American Speech-Language-Hearing Association.

Community-Based Instruction

Many school divisions 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 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 may also provide consultation services to the teachers who are providing community-based instruction.

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 metaskills. 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 abilites 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 to encourage 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

The language levels of the curriculum escalate in middle school so that the transition into the middle school learning environment can present challenges for students with language impairment that the students may have been able to manage in the elementary grades. Middle school curriculum and its curriculum delivery model (e.g., multiple subjects, different teachers with different language styles, content specific vocabulary, an emphasis on reading and writing to learn versus learning to read and write, different schedules requiring good executive functioning skills, demand for high level metalinguistic and metacognitive abilities) may require the IEP team to conduct a thorough evaluation and consider whether a termination of services is warranted.

Various service delivery options, often those in which the SLP works with the students in their middle school classes and/or alongside the content teachers may be important in supporting these students. The same is true with regard to students' transition into high school where the language demands of the educational environment again increase dramatically.

Communication Skills Secondary Course

Some school divisions have found it beneficial to offer a course on communication skills. These are most often offered at the middle or secondary level as an elective class. They may be semester or yearlong classes. These classes offer direct instruction to general education, as well as special education students, addressing communication skills in home, school, community and work settings. Topics generally include rate, volume, eye contact, social communication skills, topic, maintenance, and code-switching skills. Promoting and strengthening students' metalinguistic and metacognitive skills are typically an area of focus.

Although the speech-language pathologist may be a natural choice to teach this class, other special or general educators may also have the necessary skills to serve as the instructor. In other situations, the speech-language pathologists may co-teach this class or consult with the teacher. If the speech-language pathologist is the instructor, his/her caseload should be adjusted accordingly.

Scheduling, Service Delivery, and IEPs

Speech-language pathologists can increase the effectiveness of their treatment if a flexible approach to scheduling and service delivery is adopted. Working with school administrators is a strategy often used by veteran special educators and speech-language pathologists. This can enable the speech-language pathologist to group students in one class, enhancing the opportunity to collaborate with the teacher, decreasing the disruption to classrooms, and limiting the amount of 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 speech pathologist can work with the teacher to provide services integrated within the classroom or can select a time for pull-out services that limit disruption to the classroom. By working with one or two teachers per grade level, speech-language pathologists 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 a disruption in multiple locations for a single therapy session. This practice is becoming increasingly important with the higher academic expectations of the general curriculum and No Child Left Behind's (NCLB) requirements for minimum amount of instructional time in the content area for certain students.

Speech-language pathologists will have greater control over their own schedules if a flexible approach to service delivery is maintained. When IEPs are written appropriately, frequency, duration, and setting can provide built-in flexibility for a speech-language pathologist. Frequency and duration of services, setting, and method of service delivery may vary, depending on the needs of the child. Provision of the same frequency and duration to each student violates the requirement that services be individualized and leaves little room for flexibility and creativity within a speech-language pathologist's schedule. This allows speech-language pathologists to adjust the delivery of services a child receives at a particular period to capitalize on the benefits of increased therapy (ASHA, 2004).

Flexibility in service delivery can be built into IEPs and the speech-language pathologist's schedule in a variety

of ways. Rather than consistently scheduling two sessions per week for 30 minutes each, schedule 60 minutes per week or 120 minutes per two-weeks period, when appropriate for student needs. In addition to accommodating student and classroom needs, this offers the speech-language pathologist greater flexibility when providing services. The speech-language pathologist is better able to capitalize on opportunities to integrate services in the classroom or during school events and to reschedule sessions to accommodate absences. This type of frequency and duration statement allows the speech-language pathologist a myriad of scheduling options that can change to meet the students' needs (see Table 13). Another 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 and/or classroom demands.

A third option may be to schedule the student on a monthly basis. 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 to gauge their progress. It is not uncommon for this level of service delivery to be provided immediately prior to a determination by the eligibility committee that the student no longer has a speech-language impairment that adversely affects his/her educational performance and therefore no longer needs special education and related services.

Speech-language pathologists must always provide the total amount of service written in the IEP, regardless of the wording of the frequency and duration statement. Use of a range (i.e., 30 – 40 minutes) is typically 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 due process hearing. Speech-language pathologists and their administrators of special education should work together to discuss new scheduling formats prior to implementation.

The student's IEP should also specify where services will be provided – in the speech-language pathologist'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, recognizing 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 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.

Table 13. 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 or	Students with articulation, fluency or voice goals, who are generalizing skills, or Students who benefit from short, intense therapy sessions on a frequent basis (e.g., students with apraxia), or 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, once a week or 45 minutes + 15 minutes once a 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)

If local IEP forms require specific settings to be listed, it may be useful to specify that the child will receive services in a variety of settings including individually, in a group, 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 dates, frequency, and duration statements. If the student's speech or language needs change, the IEP team needs to reconvene to make appropriate adjustments.

General Education Initiatives

SLPs may be involved in a variety of initiatives outside special education such as Response to Intervention (RtI), literacy development, pyramids of intervention, Content Literacy Continuum® (CLC), etc. The SLP's caseload/workload must take into consideration the amount of time the SLP assists with and/or performs nonspecial education tasks.

Content Literacy Continuum® (CLC) and Strategic Instruction Model® (SIM)

The Content Literacy Continuum® is a Virginia demonstration project funded by the State Personnel Development Grant from the U.S. Department of Education. The CLC® is a schoolwide framework designed to address the content literacy needs of middle and high school students in the areas of listening, speaking, reading, and writing. CLC® involves provision of services at various levels. Strategic Instruction Model® (SIM) strategies are used by all school staff. The SLP is particularly well trained to address all levels of intervention and may play a pivotal role across all levels of CLC® implementation. Additional information about CLC® is available online at *www.doe.virginia.gov/* and through the University of Kansas Center for Research on Learning *http://www.kucrl.org*.

Response to Intervention (RtI)

Response to Intervention (RtI) 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 may play numerous roles within the RtI framework such as collaboration, program design and direct intervention. The goal of RtI is to address prevention and early intervention prior to the point of special education evaluation and service. This does involve a decrease in the amount of time spent providing more traditional and direct special education and related services. SLP's workload will need to take into consideration the time needed for indirect services and support activities.

Additional resources for RtI can be found on both the Virginia Department of Education's (VDOE) Web site and The American Speech-Language-Hearing Association's (ASHA) Web site: *www.doe.virginia.gov/instruction/response_intervention/* *www.asha.org/slp/schools/prof-consult/RtoI.htm*

Caseload Establishment

The speech-language pathologist's caseload includes all students eligible for special education and related services. In addition, all students eligible for services under 504 should be counted. Federal law does not mandate caseload size. Each state sets its own caseload caps. Virginia's current cap on the caseload for full-time speech-language pathologists is 68. The average caseload in Virginia,

Table 14. Examples of Caseload Reduction Based on Schedule

Speech-Language Pathologist	Schedule	Caseload Maximum
Part-time employee	example: 2 days/week or .4 FTE providing speech-language services	27 (.4 FTE x 68)
Department chair/lead teacher	example: 3 administration periods out of a 6 period day or 3/6 time (.5 FTE) providing speech-language services	34 (.5 FTE x 68)
Provides phonological awareness remediation	example: 1 hour/day providing phonological awareness out of a 5½ hr day or 4½ hours (.82 FTE) providing speech-language services	56 (.82 FTE x 68)

between 50 and 55, is lower than the state maximum.

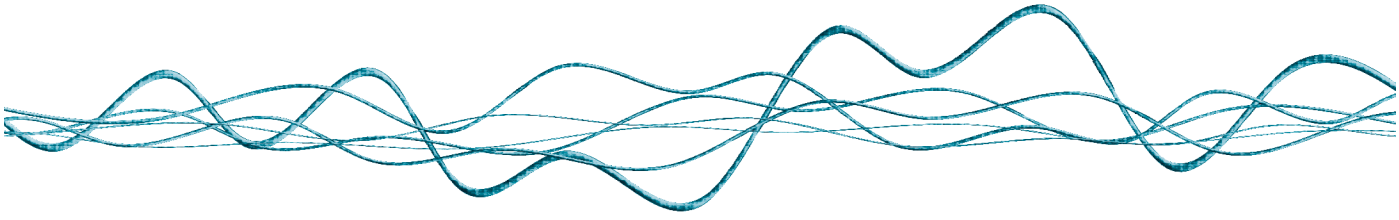
The caseload maximum is lower for part-time personnel or persons assigned other responsibilities in proportion to the amount of time spent as a service provider (8 VAC 20-81-40). Table 14 shows how an SLP's caseload would be reduced depending upon the time assigned to provide services.

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

- prevention 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, and
- 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 managing multiple speech-language pathologists within a school division, characteristics of students, such as the age and the severity of their needs can also be considered. For example, a student who is enrolled in speech-language services for an articulation error may require less service time, paperwork, consultation or preparation 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 scenario above may be reversed if the student has a severe intelligibility problem, requiring intensive therapy, versus a student with significant disabilities who is a proficient augmentative communication user, and only requires consultation to monitor the equipment. SLPs 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 addressing strategies to enhance literacy. The speech-language pathologist may serve as a member of a team developing strategies to enhance literacy of all students, provide services in collaboration with other educators, or provide direct services to children with oral language deficits that limit their access to literacy. When collaborating with teachers in a classroom, the speech-language pathologist may target the students with speech-language impairments who have oral and/or written language deficits. This collaboration may provide an incidental benefit to all students in the classroom (*Virginia Special Education Regulations*, 8 VAC 20-81-40).

Special education law defines special education, as specially designed instruction, which is further defined, as adapting, as appropriate, 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 (*Virginia Special Education Regulations*, 8 VAC 20-81-10). 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 Virginia, the general education curriculum is based on the Virginia Standards of Learning (SOL). Speech-language pathologists should be familiar with the language expectations of the SOL 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 oral language component of the English Standards of Learning has 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 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 Virginia Department of Education (VDOE) Web page www.doe.virginia.gov has numerous resources that are useful for understanding the general curriculum. Teacher resource guides, enhanced scope and sequence guides, and links to instructional materials can be useful for speech-language pathologists as they improve their understanding of the language expectations in the curriculum across different grade levels. In addition, a review of the Standards of Learning assessments can assist in identifying those language skills a student must master. The VDOE Web page also provides a blueprint of those skills measured on each SOL assessment. A review of the blueprint will assist in determining those skills that must be acquired by a certain grade level. Further, the VDOE Web page provides test items from past years. These can provide direction for the written language skills and test formats with which students will need to be familiar. Speech-language pathologists can use this information to ensure that the stimulus materials they use provide students with the same format they will need to master in their classroom and on the general curriculum (SOL) assessments.

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.

Autism Spectrum Disorders

The term autism spectrum disorder (ASD) includes Pervasive Developmental Disorders, also referenced as autism spectrum disorder, Autistic Disorder, Asperger's Disorder, Rett's Disorder, Childhood Disintegrative Disorder, or Pervasive Developmental Disorder – Not Otherwise Specified, and Atypical Autism. Students with a medical diagnosis of autism spectrum disorders must be found eligible for special education and related services using Virginia's eligibility criteria (8 VAC 20-81-80 J) before an Individualized Education Program (IEP) is developed. The Virginia Department of Education has published a guidance document, Guidelines for Educating Students with Autism Spectrum Disorder, which provides additional information and is available online at *www.doe.virginia.gov*.

Students with ASD frequently have communication challenges and may receive services from an SLP. Common characteristics of autism spectrum disorders include:

- Social differences: might have difficulty understanding the perspective of others
- Communication differences: might have difficulty understanding nonverbal (non-spoken) communication and literal vs. figurative language
- Repetitive behaviors or obsessive interests: might have strong need for predictability or a passionate interest in one topic

SLPs may collaborate with other educators to develop visual, social, communication, behavioral, sensory and assistive technology supports to improve performance of students with ASD. Knowing the student's individual strengths and weaknesses will better enable the speech-language pathologist to design a functional approach to meet that student's communicative needs. The following supports are examples of individual student supports that address features of autism and may be provided to students in any classroom.

Visual supports such as individual schedules, task lists, task organizers, templates, clearly defined physical boundaries within the classroom, visual timers, cue cards, picture prompts, picture symbols, or any visual representation of messages can enhance student performance in instruction, communication, socialization, behavior and transitions. Students with ASD often demonstrate greater understanding when shown, rather than told, what to do (Hodgdon, 1999).

Communication supports such as real objects, pictures, symbols, photographs, written words, increased wait time, voice meters, visual pragmatic cues and augmentative communication devices can all enhance both receptive and expressive language for students with ASD (Mirenda, 2009).

Social supports such as visual prompt cards, social stories©, scripts, rehearsals, peer partners, and video modeling when implemented as part of systematic social skills instruction can improve demonstration and generalization of social skills in students with ASD (Bellini, 2006).

Behavioral supports such as posted rules, consistent classroom routines, systematic reinforcement systems, tangible and nontangible reinforcers, self-monitoring scales, a quiet retreat area, periodic breaks, and showcasing student interests and passions can increase the display of positive behaviors in students with ASD (Janzen, 2003).

Assistive technology supports ranging from low tech, (such as dry erase boards, clipboards, 3-ring binders, photo albums. or highlight tape), to mid tech, (such as recording devices, timers, calculators), to high tech, (such as computers, video cameras, personal digital assistant (PDA), or complex voice output devices), can increase positive outcomes for students with ASD (WATI, 2003).

Sensory supports, such as the on-going provision of materials and activities for students with ASD to modulate sensory responses, (compression items, music, headphones, calming area, rocking chair, opportunities for rhythmic sustained movement, oral stimulation opportunities, personal fan, seat cushions) and environmental accommodations, such as the use of natural light, lower levels of lighting, incandescent rather than fluorescent bulbs, or seat placement by a window, can increase student self-regulation, decrease display of challenging behaviors, and maximize engagement in instruction (Miller, 2006).

Service delivery models should provide for multiple communication opportunities in naturally occurring settings. Pull-out services may be considered by the IEP team for teaching specific skills, however, therapy in the classroom or any teaching environment where the skill will naturally be used should be part of the student's overall communication plan.

For many students with ASD, verbal skills may be limited or nonexistent. SLPs should work with IEP teams to determine if there is a need to augment expressive communication. As with other disabilities, this may be accomplished through the use of:

- Sign language or an agreed upon set of physical gestures
- Picture or text communication system
- A speech generating device
- A combination of any of the above

As the number of children identified with this disability continues to rise, continued education and training is important; this applies to the SLP, school, community, and the families involved. A public school SLP has the responsibility to support the student's communication needs in his or her educational setting. Educating other professionals, as well as family members, is an important component of the speech-language program for students with ASD. This can be achieved by attending trainings, staying current with the research, and sharing the newly acquired knowledge with the school staff and community; in this way, the SLP is acting as both the trainee and trainer.

Some school divisions have established school autism teams that provide opportunities for staff to support and train each other as new developments in the field arise across disciplines. The VDOE training and technical assistance centers also provide training and materials to assist those working with students with ASD. For more information on training and materials visit www.ttaconline.org.

For more information see the following references:

Virginia Autism Council
www.autismtrainingva.org/
The Virginia Autism Council is a state-supported council of autism experts seeking to define needed skill competencies and to advance higher education, training and educational opportunities for personnel and caregivers supporting individuals with autism.

Autism E-News
www.doe.virginia.gov/special_ed/disabilities/autism/enews/index.shtml
VDOE's Training and Technical Assistance Centers (T-TACs) publish an e-newsletter with information on the education of students with autism. Archive copies and free subscription information is available from this link.

Evidence Maps Autism Spectrum Disorders
www.ncepmaps.org/Autism-Spectrum-Disorders.php
Comprehensive set of research on autism spectrum disorders. Information on Clinical Expertise and Client/Patient Perspectives is also provided.

Ohio Center for Autism and Low Incidence
www.ocali.org/
Education materials, research, Web site links, and online training

First 100 Day Kit
www.autismspeaks.org/community/family_services/100_day_kit.php
The Autism Speaks 100 Day Kit and the Asperger Syndrome and High Functioning Autism Tool Kit are intended for newly diagnosed families to make the best possible use of the 100 days following their child's diagnosis of autism or AS/HFA.

National Professional Development Center on Autism Spectrum Disorders
autismpdc.fpg.unc.edu/
A multi-university center to promote the use of evidence-based practice for children and adolescents with autism spectrum disorders.

School Community Tool Kit Modules
www.autismspeaks.org/community/family_services/school_kit.php
Includes information on support for school staff who interact with students with autism in various capacities. It provides valuable information and resources that can be employed by special education and administrative staff in their efforts to plan for and support students in general education environments and involvement in the school community as a whole.

Language 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, the Virginia Department of Education (VDOE) gathers and examines school divisions' data to determine if disproportionate representation due to inappropriate identification of racial and/or ethnic groups exists.

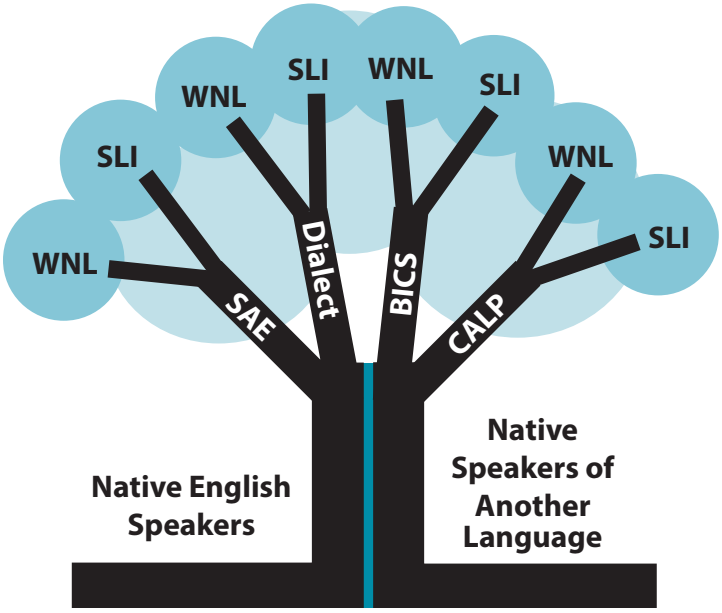
To help prevent overrepresentation, SLPs and school teams should ensure that their structures, policies, and routines account for language diversity and cultural differences. The term language diversity describes the wide variation in communication form, function, and use. For example, variations in vocabulary, morphology, syntax, and phonology may be noted in individuals who communicate in English using regional dialects. Non-native English speakers may exhibit communication differences because of language differences, accents or cultural variations.[5]

The evaluation process, and any pre-referral interventions, should first examine whether an area of concern results from a cultural or language difference, and/or economic disparity. Local community dialectal and cultural variations that exist within the school division should be examined by the team 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 a speech or language disorder. Additionally, educators must acknowledge that students using dialects are speaking or writing following the language patterns of their community to avoid making inappropriate determinations.

Cultural sensitivity and competence are a necessity for educators given the increasingly diverse populations served in schools. When there is evidence of cultural or linguistic diversity, teams must ensure that assessment and classroom teaching strategies are culturally and linguistically responsive and that teachers have the linguistic training required to build on the language skills of students from dialectally diverse backgrounds.

Teams that ignore cultural or linguistic differences demonstrate cultural incapacity, a stage in the development of cultural competence in which cultural differences are neither punished nor supported (FOR CULTURAL COMPETENCE: Knowledge, Skills, and Dispositions Needed to Embrace Diversity, 2007). When students are evaluated using a 'culture neutral lens' or when differences are viewed as inconsequential it is referred to as cultural blindness. Such cultural blindness can be evident in assessments. Test items that require a high level of knowledge and experience with mainstream culture are considered to have a high 'cultural load.' Test items that require a high level of proficiency with English are considered to have a high 'language load.' Researchers

Figure 8. A sampling of possible communication profiles.



SAE = Standard American English
BICS = Basic Interpersonal Communication Skills
CALP = Cognitive Academic Language Proficiency
WNL = Within Normal Limits
SLI = Speech Language Impaired

5 Additional information on language acquisition is provided in the section on English Language Learners.

(Ortiz and Ochoa, 2005) report that students with cultural and linguistic differences may score substantially lower (up to 35 points) than peers due to language and cultural differences. Assessments requiring Standard American English (SAE) may result in an underrepresentation of ability or achievement when assessing students using a dialect such as Southern White English (SWE) or African American English (AAE) or those whose native language is not English.

A lack of cultural sensitivity may result in inadvertent overidentification of language learning impairments by identifying dialectally and culturally acceptable productions as inadequate relative to Standard American English. Likewise, underidentification of language learning impairments may occur by mistakenly attributing deficient language abilities to the presence of dialectal or cultural factors. A critical factor in determining language difference versus disorder is comparison of the student's language abilities relative to the expectations of their dialectal and/or cultural peer group, which may be substantially different from SAE expectations.

Native English Speakers Using a Dialect

When examining a student's language use, the SLP 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.

Information about dialect density or variations in pattern use based on context is also important. Oetting and McDonald (2002) describe three possible methods for characterizing dialect usage: listener judgment, type

Table. 15 Common Features of SWE that Overlap with AAE

Feature	Example
Irregular Past / Zero past tense – Variable use of –ed to mark past tense and present tense forms of irregular verbs used	"After he open(ed) his mouth, he eat the cookie."
Invariant be - Infinitival be coding habitual actions or states	"and we be cold."
Completive done - Done used to emphasize completed actions	"He done finished his homework."
Zero-marked be - Variable use of copula and auxiliary forms of be verbs.	"My dog (is) young and (will) have to go to the park to play."
Subject – verb agreement - Subjects and verbs differ in marking and number	"My mom like_ to go shopping."
Multiple negation - Use of two or more negatives in a clause	"It's not cold no more."
Auxiliary ain't - Used in place of negative auxiliary have+not, do+not, are+not, and is+not.	"I ain't got homework."
Zero-marked plurals - Variable inclusion of –s to mark plurals	"She likes those five toy_."
Undifferentiated pronoun case or Pronoun substitution - Pronoun cases used interchangeably	"Them chasing them." "Her fell."
Existential it/they - It or they used in place of there to indicate the existence of a referent without adding meaning	"I saw it's a girl or boy running."
Appositive pronoun - Both a noun and pronoun or two pronouns used to signify the same referent	"The other dogs they barked."

based, and token based. SLPs using the listener judgment method must be familiar with dialect patterns and current research. Once the linguistic background and dialect usage of the student is determined, the SLP 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.

Some students who use a dialect may also have a language disorder. The SLP should be able to identify and distinguish contrastive features (features unique to the dialect) versus noncontrastive features (features shared with SAE) in order to differentiate a language disorder from a language difference (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.

Morphological and Syntactic features

Educators who are familiar with common dialect features should identify dialectical differences when reviewing language or writing samples. There is significant overlap in morpho-syntactic dialect patterns for Southern White English (SWE) and African American English (AAE) documented in the research (Oetting, Cantrell, Horohov, 1999; Craig et al., 2003). Table 15 includes some features of SWE that are also among the most common features of AAE.

Phonological features

Differences in the phonological system, impacting the production of sounds and words, are another area for consideration. 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, but differences when evaluating a student's speech production.

Native Speakers of Another Language

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 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 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 words and not as a word-initial sound. ASHA provides phonemic inventories for many languages online at *www.asha.org/practice/multicultural*. Resources such as Multicultural Students with Special Language Needs - New 3rd Edition by Celeste Roseberry-McKibbin can also provide features of various languages and phonemic inventories. For additional information on working with students who are learning English, visit the VDOE Web site *www.doe.virginia.gov* and the special topics section English Language Learners in this publication. SLPs should also consider that lack of familiarity with English may result in hesitations, false starts, pauses, that may not be indications of dysfluent behavior. Loudness, pitch, prosodic and suprasegmental features may also be impacted by the student's native language.

SLPs 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.

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Tabbert, Russell, (1994) Linguistic Diversity in America: Will We All Speak "General American?" *www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED374658&ERICExtSearch_SearchType_0=no&accno=ED374658*

Virginia Department of Education (2007) FOR CULTURAL COMPETENCE: Knowledge, Skills, and Dispositions Needed to Embrace Diversity. Richmond, VA: Author

Wheeler, R., Swords, R. (2006) Code-switching: Teaching Standard English in Urban Classrooms (Theory & Research Into Practice) National Council of

Limited English Proficiency (LEP)

There has been a significant increase in the number of students from culturally and linguistically diverse populations who are developing English proficiency in Virginia (VDOE data). The increasing numbers of linguistically and culturally diverse students present a unique challenge to school divisions because these students often demonstrate communication behaviors similar to those exhibited by students with language disorders. The speech-language pathologist is challenged to differentiate language differences from language disorders. The VDOE Handbook for Educators of Students Who Are English Language Learners with Suspected Disabilities, provides assistance as teams identify and assess students who are ELLs for possible eligibility for special education and related services.

The speech-language pathologist will be part of an interdisciplinary team that may include English as a Second Language (ESL) teachers, bilingual professionals, qualified interpreters and translators, in addition to the traditional members of special education teams. This team will ensure that the relevant information is compiled, including immigration background and personal life such as separation from family, trauma or exposure to war or other conflicts, length of time the student has been learning the English language, and the type of instruction and informal learning opportunities. The team will gather this information by interviewing the parents or family members, by reviewing records, or by contacting staff from the agencies or organizations that may be working with the immigrant family.

Second Language Acquisition

Speech and language pathologists must understand the first as well as the second language acquisition process. They must be familiar with current information available on the morphological, semantic, syntactic, pragmatic, and phonological development of children from a non-English language background to be able to distinguish a communication difference from a communication disorder in bilingual children.

The primary goal for most second language learners is to function as proficient learners in the classroom. Literacy skills will transfer from the first language (L1) to the developing second language (L2) if the student has learned the academic skills (reading, writing, organization of information) in the "home" or first language. Most language learners experience a time when they acquire receptive language skills before they are able to use the language expressively. They listen but do not speak. This silent period parallels the stage in first language acquisition when the children are internalizing the vocabulary and rules of the new language.

Speech-language pathologists should become familiar with the culture and communication style (e.g., independent research and consultation with knowledgeable individuals) of the student being assessed.

Students with Limited English Proficiency (LEP) may be more comfortable speaking with other second language learners in a social setting yet remain silent in the general education classroom. The silent period is part of the learning process. The students are making needed connections between the first language and their new language. Conversational proficiency is the ability to use language in face-to-face communication. It is important to remember that oral proficiency does not constitute second language proficiency. Oral proficiency is not sufficient for the increased language demands required for academic competence.

The acquisition of first and second languages shares many similarities. The field of bilingual education has adopted a model of second language (L2) acquisition that is based on Basic Interpersonal Communication Skills (BICS or social language) and Cognitive Academic Language Proficiency (CALP or academic language) (Roninson, 2003). After one to two years of exposure to L2, an average child usually acquires BICS. At this level the child socializes with peers and participates in everyday interactions. Achieving the CALP requires at least five to seven years of L2 exposure. This time period is comparable to the period needed for a monolingual child to learn the formal aspects of the linguistic code. CALP development may be longer (up to 10 years) for students. Individual differences in prior knowledge, learning styles, previous academic and abilities will determine how quickly a student will progress through the various stages.

The student's social-emotional characteristics can also influence the rate of L2 learning. The student's personality (extrovert vs. introvert, low vs. high self-esteem, shy vs. assertive), home culture's attitudes toward L2 and cultural adjustment, and socioeconomic status can be factors that will alter the time for L2 acquisition (Roninson, 2003). Brice (2002) identifies a number of commonly held myths about students with limited English proficiency that can

Table 16. Comparison of Children with Limited English Proficiency with and without Disabilities

Characteristics	Child with limited English proficiency	Child with limited English proficiency and a disability
Communication Skills	Typical language learning potential. Communicative use of English is reduced and easily noted by native English speakers. English phonological errors common to culture. No fluency or voice impairment. Can be communicatively proficient to function in society.	May exhibit speech and language disorders in the areas of articulation (atypical phonology or prosody), voice, fluency, or receptive and expressive language; may not always achieve communicative competence in either first or second language. May exhibit communication behaviors that call attention to himself/herself in L1.
Language Skills	L1 skills are appropriate for age level prior to exposure to L2. The nonverbal communication skills are culturally appropriate for age level (e.g., eye contact, response to speaker, clarification of response, turn-taking). Vocabulary deficit and word-finding difficulties in L2 only. Student may go through a silent period. Code switching common.	May have deficits in vocabulary and word finding, following directions, sentence formulation, and pragmatics in L1 and L2. Atypical syntactic and morphological errors. Persistent errors in L2. Low mean length of utterance (MLU) and difficulties in first language and English cannot be attributed to length of time in English-speaking schools. Stronger performance on tests assessing single word vocabulary than on tests assessing understanding of sentences or paragraphs.
Academic Functioning	Typical language learning potential. Apparent problems due to culturally determined learning style, different perceptual strategies, or lack of schooling in home country.	May observe limited progress in second language acquisition, difficulty retaining academic information, difficulty in schoolwork of home country, or difficulty in acquiring the first language.
Progress	Progress in home language is contingent upon adequacy and continuation of first language instruction. Academic progress in English should be steady, but will depend on the quality and quantity of English instruction.	May show less than expected progress in English acquisition and development of academic skills. May show a marked or extreme discrepancy between different areas (e.g., oral skills and writing skills) that cannot be attributed to lack of sufficient time or appropriate interventions.
Social Abilities	No social problems in L1. May have some social problems due to lack of familiarity with American customs, language, expected behaviors, etc. Student may experience social isolation and may be likely to be a follower rather than a leader in a group of English speakers.	May exhibit persistent social and behavioral problems that are in L1 and his/her native culture and not attributable to adjustment and acculturation.

Adapted from Handbook for Educators of Students Who Are English Language Learners with Suspected Disabilities ***(2009), Virginia Department of Education***

impede educators' or speech-language pathologists' ability to understand the difference between a language impairment and language difference.

Eligibility for special education with a speech-language impairment must be based on the presence of a speech-language impairment in L1, not the child's limited English proficiency. Care must be given to determine the cause of the communication skill deficits. Table 16 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.
- Parental concerns about L1 communication skills.
- ESL teacher reports slower than typical acquisition of English.

Use standardized tests with caution. If the normative sample for the test did not include a comparable group or if the testing procedure was modified, scores should not be reported. Review the child's written work to identify any language patterns. Complete an MLU assessment in both languages.

The speech-language pathologist should become familiar with the student's cultural communication norms. Analysis of the English errors of phonology, morphology or syntax should consider the phonology, morphology, syntax, semantics and pragmatics of the student's native language (Derr, 2003).

At any point in the process of acquiring second language proficiency, a student may appear to have language delays or even language disorders as observed in the classroom. Making a differential diagnosis is challenging for both the bilingual and monolingual speech-language pathologist. However, if the speech-language pathologist's analysis shows that English errors are due to interference caused by learning L2, a disorder would not be indicated, but rather a characteristic of second language acquisition.

Working With Foreign Language Interpreters and Translators

Interpreters can be used when there are no available speech-language pathologists 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 preferable to the use of a family member. The speech-language pathologist should meet with the interpreter to explain the purpose and protocols for the assessment, provide descriptions of English terminology, and stress confidentiality.

For more information see the following references:

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Roseberry-McKibbin, C. (1994). "Assessment and intervention for children with limited English proficiency and language disorders." *American Journal of Speech-Language Pathology, 3* Willig, A. (1992). In Ortiz, A.: "Assessing appropriate and inappropriate referral systems for LEP".

Web sites:

Handbook for Educators of Students Who Are English Language Learners with Suspected Disabilities (2009, Virginia Department of Education
www.doe.virginia.gov/instruction/esl/standards_resources/resources/handbook_educators.pdf

Virginia Department of Education Instructional Resources for English as a Second Language
www.doe.virginia.gov/instruction/esl/standards_resources/index.shtml

The Council for Exceptional Children (CEC) Professional Practice Topics and Information on Cultural & Linguistic Diversity
www.cec.sped.org/AM/Template.cfm?Section=Cultural_and_Linguistic_Diversity&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=36&ContentID=5541

National Association for Bilingual Education (NABE)
www.nabe.org

Culturally Competent Assessment of English Language Learners for Special Education Services *www.nasponline.org/publications/cq/pdf/V38N7_CulturallyCompetentAssessment.pdf*

English Language Learners: An Introductory Guide for Educators
www.nasponline.org/resources/culturalcompetence/ell_educators.pdf

National Clearinghouse for English Language Acquisition & Language Instruction Educational Programs (NCELA)
www.ncela.gwu.edu

Phonological Processes

A phonological process is a systematic change to a class or group of sounds that simplifies production for the child as a part of normal or disordered development. Phonological processes are a researched-based means of analyzing, describing and treating speech production in children. While age-norms are useful when only a few sounds are in error, when multiple sounds are in error phonological processes provide an alternative way to examine and treat those errors.

When multiple sounds are in error, students may be very difficult to understand. This is referred to as speech intelligibility. In the schools, speech intelligibility is important because it indicates how much the phonological processes present are affecting the student's communication ability. A study by Overby, Carrell, and Bernthal (2007) found that speech intelligibility was a variable that influenced teachers' perceptions of a student's academic, social, and behavioral performance in school. When discussing presence of an impairment and possible educational impact, it is important to consider speech intelligibility and phonological processes.

Phonological analysis is especially helpful when developing treatment for children with multiple sound errors and/or unintelligible speech (Hodson, 1992). By addressing the production of multiple sounds within a pattern simultaneously, phonological remediation has been shown to be both effective and efficient in improving sound production and increasing speech intelligibility (Klein, 1996).

The types of phonological processes (See Table 17) fall into three general categories:

- Whole Word/Syllable Processes
- Substitution Processes
- Assimilation Processes

Whole Word/Syllable processes change the syllables structure by either taking away a sound(s), adding a sound(s), moving a sound, or a combination of these. Final Consonant Deletion would be an example of a process that would fall in this category. **Substitution** processes replace one sound with another, changing something in the manner, place or voicing of the sound. Stopping and Fronting are both types of substitution processes. **Assimilation** processes are also known as harmony processes, as one sound changes to become more like (or exactly like) another sound in the word. For example, when a sound at the beginning of a word changes one at the end, it is described as Progressive Assimilation. A more detailed list of processes, assessment and remediation techniques are available in the online training modules at www.ttaconline.org.

The use of phonological processes appears to be part of normal development at very young ages. Children's use of phonological processes should decrease steadily as they get older. One study documented that a group of children ages 18 months to 21 months had a 55 percent occurrence of phonological processes, while a group of children age 26 months to 29 months were found to have only a 22 percent occurrence (Preisser, Hodson, Paden, 1988). Researchers' data on specific age norms for phonological processes vary. Some processes, such as reduplication, typically disappear before age three, but others, such as gliding of liquids, tend to persist up to age five.

Most processes fade by age five. While this normative information should be considered as a factor during an evaluation, determinations of whether or not a student's speech production is disordered and eligible for special education also should include consideration of intelligibility, consistency of productions, and stimulability (Bernthal & Bankson, 1998).

Although articulation and phonology are both terms used when describing speech sound production, they are not interchangeable. Articulation can best be described as the movement of the articulators when producing a sound, while phonology is a component of language that controls the patterning of speech sounds. When describing speech sound production errors in terms of articulation, the assumption is that there is a problem with the movement of the articulators which needs to be corrected on a sound-by-sound basis. When describing speech sound production errors in terms of phonology, the assumption is that there is a problem with the patterning of the sounds and it is connected to the meaning of language. In that case, remediation should focus on changing the patterns of sound production in groups, and emphasizing the impact of the change on meaning.

Table 17. Phonological Processes

	Phonological Process	Description	Example
Whole Word/Syllable Processes	**Consonant Cluster Simplification (reduction)**	a consonant cluster is simplified, changed, or eliminated	'star' becomes 'tar' or 'dar' 'must' becomes 'mu'
	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	**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	'light' becomes 'wight'
	Glottal Replacement	a final or intervocalic sound is replaced by a glottal stop	'wagon' becomes 'wa?on'
	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*	**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'

* *May be progressive - a sound at the beginning of a word changes one at the end or regressive - a sound at the end of a word changes one at the beginning. Adapted from Bernthal and Bankson, 1998*

For more information see the following references:

Bernthal, J. E., & Bankson, N. W. (1998). *Articulation and phonological disorders* (4th ed.). Boston, MA: Allyn and Bacon.

Hodson, B. W. (1992). Applied phonology: constructs, contributions, and issues. *Language, Speech, and Hearing Services in Schools.*23(3), 247-252.

Khan, L. (1982). A Review of 16 Major Phonological Processes *Language, Speech, and Hearing Services in Schools* Vol.13 77-85

Klein, E. S. (1996). Phonological/traditional approaches to articulation therapy: a retrospective group comparison. *Language, Speech, and Hearing Services in Schools.* 27(4), 314-323.

Overby, M., Carrell, T. & Bernthal, J. (2007). Teachers' perceptions of students with speech sound disorders: a quantitative and qualitative analysis. *Language, Speech, and Hearing Services in Schools.* 38(4), 327-341.

Priesser, D. A. , Hodson, B. W., Paden, E. P. (1988). Developmental phonology: 18-29 months. *Journal of Speech and Hearing Disorders.* 53(2), 125-130.

Web sites:

Phonological Processes (three online training modules)
www.ttaconline.org

Overview of Phonological Processes
www.asha.org/public/speech/disorders/SpeechSoundDisorders.htm

Dysphagia

Dysphagia is a disorder in swallowing, resulting in difficulty moving food through the mouth and into the stomach. The number of children requiring management for dysphagia within the school setting is growing. In the school setting, it is important that teams be established to address the needs of children with swallowing disorders. Ideally, there will be a team in each school where there is a child with dysphagia. School divisions may want to begin by creating a divisionwide dysphagia team. The team should be comprised of the following individuals:

- speech-language pathologist,
- occupational therapist,
- school nurse,
- child's teacher,
- school nutrition director,
- cafeteria manager, and
- the child's parent.

NOTE: Most schools have a list of Cardiopulmonary Resuscitation (CPR) trained staff within their schools. It is important to ascertain where trained staff members are in relationship to the children with dysphagia.

This team should stay in close contact with the child's parent and physician, in addition to educating the staff on the symptoms and support available within the school. The 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/her skills are current. Ideally, the speech-language pathologist will 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 school division 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; and
- 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.

An Individualized Health Care Plan shall be developed to gather the child's medical history, discuss the need for a possible modified barium swallow study, devise a feeding and swallowing plan for school, and develop an in-school emergence plan. If a modified diet is required for the student, the school nutrition director will need a doctor's order to modify the food items offered or the texture of food offered as part of a school meal. Appendix F includes a checklist that may be used by a school-based swallowing team.

The Individualized Health Care Plan may be attached to the child's IEP. In some cases, the child will need direct intervention to develop his/her feeding skills. In such a situation, an IEP meeting will also be held to develop the goals and objectives of intervention. Sample IEP statements are shown below.

- **Present Level of Educational and Functional Performance**
  Maria has low lip tone resulting in excessive drooling and spillage when eating and drinking. Maria needs to be visually cued to close her lips.

- **Goals and Objectives**
  Maria will improve her ability to eat independently, increasing the number of different foods, textures, and temperatures she eats during lunch without assistance.

- **Services**
  The amount and frequency of direct intervention should be listed. The service provider may be any member of the team with the appropriate skills.

- **Services**
  The dysphagia team member will train the paraprofessional, classroom teachers, and other staff, as appropriate, in safe feeding techniques.

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 to request their refusal in writing. This request should acknowledge receipt of the dysphagia report, consequent treatment discussion, and desire for continued unaltered feedings at school.

For more information see the following references:

American Speech-Language-Hearing Association. (2002). *Roles of Speech-Language Pathologists in Swallowing and Feeding Disorders* [Position Statement]. Available from www.asha.org/policy

American Speech-Language-Hearing Association. (2002). *Knowledge and Skills Needed by Speech-Language Pathologists Providing Services to Individuals With Swallowing and/or Feeding Disorders* [Knowledge and Skills]. Available from www.asha.org/policy

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.

Web sites:

VDOE's Training and Technical Assistance Centers
www.ttaconline.org
Four free online training modules that provide a basic overview of how school-aged children typically swallow, screening tools, case management, and overall management of students requiring dysphagia intervention and management.

ASHA Swallowing and Feeding Disorders
www.asha.org/slp/clinical/dysphagia/
This Web site contains professional policy documents and special issues such as assessment, treatment, special populations, and additional resources.

Auditory Processing Disorders

The central auditory nervous system develops and matures at least through age 12. In theory, persons with auditory processing disorders generally develop symptoms 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 9. Auditory processing disorder is not one of the 14 federal disability categories outlined in IDEA. To qualify as a "child with a disability," the student must have the characteristics of one of the existing 14 disability categories, demonstrate an educational impact as a result of the disability, and require specialized instruction.

Some researchers claim that auditory processing is a neural process. It is important to note that auditory processing is separate from language comprehension and is not a hearing acuity impairment. Children who have an impairment in auditory processing may have a diagnosis of Auditory Processing Disorder.[6] Students with auditory processing disorders may have an underlying receptive language disorder and abnormal language scores.

A student with a potential 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 nonspeech),
- **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), and
- **auditory cohesion** – is the ability to integrate information gathered auditorily.

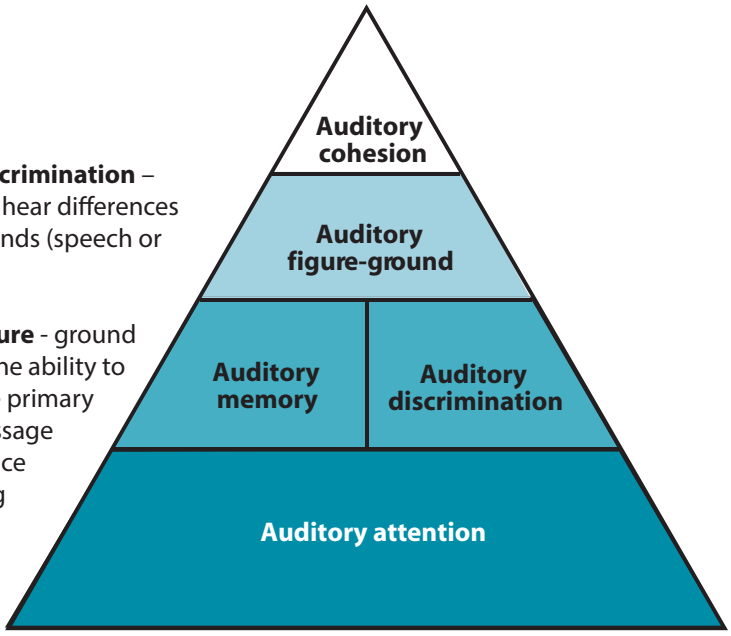

Figure 9. Auditory Processing Skills Hierarchy

Evaluation

When a child is referred for an evaluation to determine special education eligibility due to a diagnosis of auditory processing disorder or a potential disorder, and the special education director or designee decides to move forward with an evaluation, the team should consider certain assessment measures and medical information about the child.

The following procedures are offered as a best practice approach to completing an assessment of a child suspected of having an auditory processing disorder.

- An audiological evaluation should be conducted following a referral for auditory processing. A licensed audiologist with experience working with school-age children with auditory processing disorders should conduct the evaluation.
- Review developmental and student records. Identify onset of symptoms, developmental characteristics, and educational background. Review current medications and possible effects on performance.
- Use questionnaires, checklists, and interviews to gather input from teachers and parents regarding student performance, distractibility, attentiveness, and compensatory strategies in both quiet and noisy settings.
- Complete multiple classroom observations with special attention to the following areas: classroom noise (i.e., in-class, outside-class reverberation), proximity to teacher, and comparison with other students in the class.
- Gather sufficient assessment data to allow for analysis of all auditory skills (attention, memory, discrimination, figure-ground, and cohesion).

The student must meet the Virginia eligibility criteria for one or more of the disability areas in order to be eligible for special education and related services.

6 Auditory Processing Disorder may also be termed Central Auditory Processing Disorders (CAPD).

Table 18. Overlap Between Auditory Processing Disorders, Attention Deficit Disorders, and Speech-Language Impairments

Behavior	Auditory Processing Disorder	ADD/ ADHD	Speech-Language Impairment
Attention Concerns			
Distractibility	X	X	X
Difficulty listening	X	X	X
Difficulty understanding verbal information	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			
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			
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
Frequently looses or misplaces items		X	
Poor organizational skills		X	

Adapted from Chesterfield County Public Schools, 2000.

Management

Regardless of the eligibility determination, students with an auditory processing disorder will benefit from a multidisciplinary team approach to management. The team may include the classroom teacher, speech-language pathologist, school psychologist, educational diagnostician, audiologist, parent, and special education teacher if appropriate (often the teacher of students with learning disabilities). Team members should recognize the significant overlap in the presenting characteristics of attention deficit disorder (with or without hyperactivity), speech-language impairment, and auditory processing disorders. It is important to address and rule out other common disabilities that may impact student performance (see Table 18).

Children with auditory processing disorders will benefit most from management of three aspects of the following factors: environmental modifications, development of compensatory strategies, and direct treatment for specific deficits. The following summarizes some key management strategies that may be implemented 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.
- Reduce or eliminate background noises (e.g., audiovisual equipment).
- Keep doors and windows closed to reduce outside and hall noise; place windows and doors to the child's back 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 or pads/tennis balls on chair legs for noncarpeted floors, sound-absorbing room dividers and bulletin boards).

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. Examples of strategies include:

- Develop habit of previewing (announcing content), stating (presenting content), and reviewing (summarizing content).
- Teach the child how to manage his/her placement within the classroom to reduce the impact of noise.
- Teach the child how to maximize his/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 and/or age appropriate vocabulary.
- Teach auditory memory enhancement activities (e.g., imagery and drawing).
- Use of 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. Strategies should be addressed, as appropriate in the child's IEP or 504 plan.

For more information see the following references:

Bellis, T.J. (2003). *Assessment and management of central auditory processing disorders in the educational setting: From science to practice, second edition.* Clifton Park, NY: Delmar Learning.

(Central) Auditory Processing Disorders (2005) American Speech-Language-Hearing Association www.asha.org/docs/html/TR2005-00043.html

Chermak, G. D., & Musiek, F. E. (Eds.) (2007). *Handbook of (central) auditory processing disorder: Comprehensive intervention – Volume II.* San Diego, CA: Plural Publishing.

DeBonis, D, Moncrieff, D. (2008). Auditory Processing Disorders: An Update for Speech-Language Pathologists ***American Journal of Speech-Language Pathology*** Vol.17 4-18

Colorado Department of Education (Central) Auditory Processing Deficits: A Team Approach to Screening, Assessment, and Intervention Practices (2008) www.cde.state.co.us/cdesped/download/pdf/APDGuidelines2008.pdf

Web sites:

ASHA Web article *Understanding Auditory Processing Disorders in Children*
www.asha.org/public/hearing/disorders/understand-apd-child.htm
Overview of terminology, diagnosis, and treatment for auditory processing disorders.

National Institute on Deafness and Other Communication Disorders
National Institutes of Health
www.nidcd.nih.gov/health/voice/auditory.html
Overview of auditory processing disorder causes, diagnosis, and treatment.

Colorado Department of Education (Central) Auditory Processing Deficits: A Team Approach to Screening, Assessment & Intervention Practices (Revised 2008) www.cde.state.co.us/cdesped/download/pdf/APDGuidelines2008.pdf
Guidelines for the screening, assessment, and intervention of (central) auditory processing deficits were developed by the Task Force on Auditory Processing, facilitated by the Colorado Department of Education.

Assistive Technology

The increase in the availability of technology in general education, in conjunction with IDEA's delineation of the school's responsibility to provide assistive technology (AT) in the educational setting, 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 a student to:

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

Assistive Technology and the Special Education Process

Every IEP team must consider whether the student requires AT devices and services and that such devices and services will be provided as needed. (*Virginia Special Education Regulations* 8 VAC 20-81-110 F (34 CFR 300.324[a]). The *Virginia Special Education Regulations* define 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 assistive technology services as:

> "… any service that directly assists an individual with a disability in the selection, acquisition, or use of an assistive technology device…." (*Virginia Special Education Regulations*, 8 VAC 20-81-10)

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 the student's IEP team may identify as necessary for the provision of FAPE. The team's considerations should not be limited to the devices and services currently available within the division. The Virginia Assistive Technology Resource Guide maintains a comprehensive list of AT strategies, modifications, accommodations of tasks, and assistive technology solutions for specific academic and communication areas. Up-to-date information on assistive technology can be found at The Family Center on Technology and Disability Web site *www.fctd.info* or from the Virginia Department of Education's Training and Technical Assistance Centers at *www.ttaconline.org.*

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 it requires a collaborative team approach. Potential members of an AT team include the speech-language pathologist, 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 (of the service), and IEP teams whenever AT for the student is being discussed.

Assessment

The following series of questions can guide the assessment and IEP teams as they consider the need and type of AT:

- 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 is 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 the device? (Customizing and maintaining devices, coordinating services, and training the student, family or educational personnel should be considered.)
- What is the schedule for reviewing progress toward the goals and objectives that involve AT?

Within an IEP, AT may be:

- listed in the accommodations or services section of the IEP. An accommodation refers to the necessity to modify a task or an assignment so that the student may compensate for the skills that he/she does not have. For example, a student may retell stories, but will tell them using a communication device.
- 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.
- 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 a computer or an augmentative communication device, or other similar devices can occur as a related service that supports the student's educational program.

Periodic Review

To ensure there is no device "abandonment" the following questions can serve 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 re-evaluation of appropriateness?

The AT team members will also need training to keep their knowledge and skills current. This may be provided through participation in regional, state, or national training opportunities; distance education, including Web-based training; or self-study.

When a student with disabilities uses AT to perform either in the classroom setting, community-based instruction, 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 involves the participation of the student, parents, and professionals from the educational setting and community agencies working together to ensure 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.

For more information see the following references:

VDOE (2010) INFUSING ASSISTIVE TECHNOLOGY FOR LEARNING: *Assuring Access for all Students—A companion document of the Educational Technology Plan for Virginia: 2010-15. Retrieved August 2010* www.doe.virginia.gov/support/technology/edtech_plan/assistive_technology.pdf

Blackhurst, A. E. (2001). A Functional Approach to the Delivery of Assistive Technology Services. Lexington, KY: University of Kentucky, National Assistive Technology Research Institute.

Chambers, A. C. (1997). *Has Technology Been Considered? A Guide for IEP Teams.* Reston, VA.: Council of Administrators of Special Education and Technology and Media Division of Council for Exceptional Children. [Available full text from ERIC - www.eric.ed.gov/ERICWebPortal/recordDetail?accno=ED439561]

Web sites:

VDOE's Training and Technical Assistance Online Web Site
www.ttaconline.com
All information services, resources, and online training opportunities are available free of charge online.

Virginia Assistive State Directed Project
vaatpp.org
The Assistive Technology project addresses priorities of VDOE with centralized dissemination of information about the laws which define AT devices and services, the process of consideration of AT by Individualized Education Program (IEP) teams, and AT assessment and resources.

AIM-VA Accessible Instructional Materials Center of Virginia
aimva.org
The Virginia Accessible Instructional Materials Center (AIM-VA) will produce and deliver accessible instructional materials for Local Educational Agencies (LEAs) in Virginia who have students with an IEP indicating a need for alternate formats of printed materials.

Assistive Technology at Virginia Commonwealth University TTAC
www.vcu.edu/ttac/assistive_technology/

Medicaid/Famis Reimbursement

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. The 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.

There are two facets to the Medicaid program in schools. Special education billing, billing Medicaid for services specified on the IEP that can be considered medical as well as educational (e.g., speech-language services, occupational therapy, nursing) has been in place in Virginia since 1991. Administrative claiming, claiming expenses that support the Medicaid program, was initiated in 2003.

The Department of Medical Assistance (DMAS) provides information about Medicaid billing on their Web site and in their provider manual. All materials are available online at *www.dmas.virginia.gov*.

Special Education Billing

School divisions must have an active provider agreement with DMAS for both special education billing and administrative claiming. This is a central office function. In addition, the division must submit each service provider's qualification with the Department of Education. Since Medicaid is a health care program, the qualification requirements vary from those required by the Board of Education.

When any speech-language pathologist not meeting DMAS requirements provides treatment, there must be a supervisory 30-day on-site review. This must be documented in the monthly progress notes section.

DMAS requires a periodic review of the child's progress and revising or deleting goals as needed. This review allows for determining if the child has reached a plateau, regressed, or progressed as anticipated.

It should be noted that DMAS will only reimburse services that result in significant and practical improvement in the child's level of functioning within a reasonable period of time (Improvement of Function). DMAS will not reimburse for services that do not result in significant practical improvement, or the skills of a licensed therapist are not required in carrying out the treatment to maintain function (e.g., "maintenance therapy" or "monitoring").

Whenever the eligibility committee finds a child is no longer eligible for special education and related services or the IEP determines that a specific related service should be terminated Medicaid may no longer be billed for services. Additionally, Medicaid-reimbursed rehabilitation services will be terminated when further progress toward the established goals is unlikely and/or the family or caretaker can provide the services (i.e., home program) and the skills of a qualified therapist are no longer required.

Coordination of Services: Medicaid requires that when two or more rehabilitation providers are providing services to a child that those services are coordinated (i.e., school and after school therapies). Coordination of services allows two treatment therapists to assure that maximum benefit of services is achieved for the child based on the treatment goals per the plan of care (POC). Coordination of services may prevent duplication (e.g., when a school speech-language pathologist and community-based speech-language pathologist have identical treatment plans and provide identical services.) Documentation of coordination should be recorded in the therapist's progress notes.

Administrative Claiming

Administrative expenses in support of the Medicaid program may be claimed. Activities include outreach, translation, coordination of services, and referrals.

Use of Funds

Federal requirements state that federal funds must be used to supplement, not supplant, other appropriations (20 U.S.C. Sec. 613 [a][9]). This means that Medicaid revenue may not be used to replace IDEA funds. There is no other federal or state requirement regarding the use of Medicaid revenue.

School divisions are encouraged to use the funds for special education or health-related services. Some funding may be used to provide support to those employees who are completing the additional requirements to generate the funds. Potential uses include: supplement salaries, pay workshop and conference fees; purchase augmentative/alternative communication devices or other assistive technology; pay fees to secure the license needed to bill Medicaid; or purchase computer software, supplies, materials, equipment. Some localities

have used Medicaid revenue to fund additional staff, lowering caseloads for all speech-language pathologists in the division.

For more information see the following references:

Centers for Medicare and Medicaid Services
www.cms.gov/
Regulations, provider manuals, information about state plans.

Medicaid School Provider Manual for Virginia
dmasva.dmas.virginia.gov/Content_pgs/mch-home.aspx

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Power-deFur, L. (April 2001). Making changes: Advocacy suggestions for reducing caseloads. Special Interest Division 16 School-Based Issues. Rockville, MD: American Speech-Language-Hearing Association.

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.

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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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Virginia Board of Education. (2000). *Guidelines for Mentor Teacher Programs for Beginning and Experienced Teachers*. Richmond, VA: Author.

Virginia Board of Education. (1998). Licensure Regulations for School Personnel. Richmond, VA: Author.

Virginia Department of Education. (2002). *Guidelines for Participation of Students with Disabilities in the Assessment Component of the State's Accountability System*. Richmond, VA: Author.

Virginia Department of Health. (1999). Virginia School Health Guidelines. Richmond, VA: Author.

Virginia Institute for Developmental Disabilities. (2001). Creating collaborative IEPs: A handbook. Richmond, VA: Virginia Commonwealth University.

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Notes

APPENDIX A:
Print and Web Resources

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

Virginia Resources

www.doe.virginia.gov Main Web site of the Virginia Department of Education.

www.ttaconline.org Main Web site for the VDOE Training and Technical Assistance Centers or T/TAC.

www.infantva.org Main Web site for the Infant & Toddler Connection of Virginia.

www.shav.org Main Web site for the Speech-Language-Hearing Association of Virginia (SHAV).

www.dhp.state.va.us/aud/default.htm Main Web site for the Virginia Board of Audiology and Speech-Language Pathology.

www.vats.org Main Web site for the Virginia Assistive Technology System (VATS).

www.vddhh.org Main Web site for the Virginia Department for the Deaf and Hard of Hearing.

www.dmas.virginia.gov Main Web site for the Virginia Department for Medical Assistance Services (Medicaid).

National Resources

www.asha.org Main Web site of the American Speech-Language-Hearing Association (ASHA).

www.tesol.org Main Web site of the Teachers of English to Speakers of Other Languages, Inc. (TESOL).

www.ed.gov Main Web site for the United States Department of Education.

www.cal.org Main Web site for the Center for Applied Linguistics (CAL).

The following sites would be useful when conducting research searches to assist with ensuring use of evidence-based practices (EBP):

American Psychological Association's PsycINFO
www.apa.org

Education Resources Information Center's (ERIC) public database
www.eric.ed.gov

PubMed's Medline
www.ncbi.nlm.nih.gov/pubmed

Cochrane Collaboration
www.cochrane.org

ASHA journals
www.asha.org/publications

Virginia Department of Education Technical Assistance and Guidance Documents
The following technical assistance and guidance documents are available from the Virginia Department of Education Web site, www.doe.virginia.gov.

VDOE's Division of Special Education and Student Services has revised or developed, or is in the process of revising or developing, the following technical assistance documents on matters related to implementing the Virginia special education regulations. These documents are, or will be posted, to VDOE's Web site at www.doe.virginia.gov/VDOE/SESS

- Educational Interpreter Qualifications in Virginia Public Schools, Frequently Asked Questions
- Revised VDOE Model IEP Form, Standards-based IEP form, Secondary Transition IEP form
- Revised VDOE's Model Procedural Safeguards Document
- Model Policies and Procedures Document for LEAs and SOPs
- Guidance Document for Local Screening Requirements in Virginia's Public Schools
- Technical Assistance Document on Matters Related to Residency and FAPE Responsibilities for Virginia's Public Schools
- Revised Technical Assistance Document on Discipline Requirements
- Revised VDOE Complaint Resolution Procedures
- Revised Complaint Appeal Procedures
- Fact Sheets for Parents:
    - Change in category name from MR to ID; Emotional Disturbance to Emotional Disability
    - Phasing out of the SD category
    - Explanation for the age change to the DD category
    - Parent Notification of RtI

APPENDIX B:
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, weaknesses, and provide a comparison to peers.

Expository Text: Nonfiction work intended to inform or explain. Some common formats of expository writing include descriptions, 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: Includes overall length, length per unit, mean length of utterance (MLU), communication units (C-units), terminal unit (T-units), syntactic complexity; elaboration; morphological adequacy; lexical diversity.

Language Sample Analysis: A process that consists of four parts: the student's language sample, transcription of sample, analysis, and interpretation. 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 produces 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 macro structural 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 (Crews, 1977). 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 (Crews, 1977). 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; Quirk & Greenbaum, 1973):

1. A relative clause (i.e., adjective clause) acts like an adjective and modifies the noun that precedes it: for example, "The cat that was sleeping on the couch was content."

2. An adverbial clause acts like an adverb and modifies a verb. 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 is when your opponent's king cannot escape."

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

Nippold, M., Hesketh, J., Duthie, J., and Mansfield, T. Conversational Versus Expository Discourse: A Study of Syntactic Development in Children, Adolescents, and Adults. Journal of Speech and Hearing Research 2005; 48;1048-1064

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

Gillam, R.B. & Gillam, S. (2006) Making Evidence-Based Decisions about Child Language Intervention in Schools, Language Speech and Hearing Services in Schools, Vol.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.[Web of Science][Medline]

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

Leadholm, Barbara J.; Miller, Jon F. (1994) Language Sample Analysis: The Wisconsin Guide. Bulletin 92424. www.eric.ed.gov/PDFS/ED371528.pdf Wisconsin State Department of Public Instruction, Madison.

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

APPENDIX C:
Speech-Language Sample Screening Forms

These screening instruments are designed for the classroom teacher to administer. Teachers may "pass" students who demonstrate no speech-language-voice problems on this checklist. Any student who does not "pass" should be referred to the speech-language pathologist who will conduct a second screening.

Completed forms shall be forwarded promptly to the designated person in the school division. The speech-language pathologist may be notified to conduct the rescreening for any student who does not "pass." The rescreening must be completed within the 60- business day time frame.

If results indicate a suspicion of a disability, the student shall be referred to the special education administrator. Some screening situations may result in a child failing the screening without a suspicion of a disability. Some examples of this include when a student speaks another language fluently, has a medical condition that results in variation in voice quality, or refuses to participate in screening. The individual conducting the screening should determine if the results warrant a referral for evaluation due to a suspicion of a disability.

Sample New Student Speech, Language and Voice Screening Instrument: K-3

Check observed behaviors. A student passes if "never" is checked for **all** behaviors.

Student: _____ **Screening Date:** _____

Grade: _____ **Teacher:** _____ **Date:** _____

Does the child have limited English proficiency? ___Yes___ NO

In comparison with his/her peers:		NEVER	SOMETIMES	ALWAYS
1	The child is difficult to understand.			
2	The child has a hoarse and/or nasal voice that does not seem related to a cold or allergies.			
3	The child has difficulty with phonological awareness activities (e.g., rhyming, sound blending, syllable segmentation).			
4	The child has difficulty following directions and/or responding to questions.			
5	The child has difficulty making his/her wants and needs known.			
6	The child has difficulty using complete sentences or correct grammar.			
7	The child has limited vocabulary.			
8	The child has difficulty expressing an idea or event (e.g., what he did over the weekend).			
9	The child appears frustrated when speaking.			
10	The child exhibits part-word or word repetitions, sound blockages, or excess facial or neck movement when speaking (i.e., stuttering).			

Other communication concerns:

Sample Communication Screening Checklist Grades 6-12

Student: _____ **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.

Answer each below question using the following codes

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

☐ Yes ☐ No The student is an English language learner or uses a socio-cultural dialect.	
☐ F ☐ 0 ☐ N ☐ N.0.	This student avoids talking in class.
☐ F ☐ 0 ☐ N ☐ N.0.	This student appears frustrated when trying to talk.
☐ F ☐ 0 ☐ N ☐ N.0.	This student avoids talking to peers/adults.
☐ F ☐ 0 ☐ N ☐ N.0.	This student seems concerned about his/her speech.
☐ F ☐ 0 ☐ N ☐ N.0.	This student withdraws from group activities.
☐ F ☐ 0 ☐ N ☐ N.0.	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: _____

Sample Speech-Language Screening Checklist

Student: _____ **Grade:** _____

Teacher: _____ **Date:** _____

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 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, repetitions and/or tension?
☐ 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' and attach to this form.

Please return this form to: _____ **by:** _____

APPENDIX D:
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 during eligibility and IEP decisions, and assure consistency among speech-language pathologists across Virginia. After review of all assessment data, the team should complete the appropriate Assessment Summary forms. Data from four assessment sources 1) academic activities, 2) academic tests and measures, 3) SLP probes, and 4) SLP tests and measures, should be included in a comprehensive assessment. 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.

When a valid comparison to a normative sample cannot be made or a student has significant impairments, teams should consider completion of the Functional Communication Summary form. This tool provides an opportunity to document communication skills that cannot be represented using typical norm-referenced measures for students who cannot be compared to a normative sample such as those who are English Language Learners, those with intellectual disabilities, and those who use alternative forms of communication.

The eligibility committee will consider the comprehensive assessment data, in conjunction with criteria in Virginia regulations for eligibility as a student with a speech-language impairment and other information, to determine eligibility. Eligibility team members should note that **Eligibility is based on:**

(1) the presence of a speech-language impairment,

(2) an adverse educational impact, and

(3) the need for special education (specialized instruction) and related services (services 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. See the eligibility section of these guidelines for further information on Virginia's eligibility regulations.

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 level of educational 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 this manual for further information on IEP development and decision-making.

Speech Production Assessment Summary

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 productions may interfere with intelligibility, social communication, and/or academic and vocational achievement.

Students 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/her motor skills and has mastered compensatory strategies, the child may no longer be eligible for services.

This speech production assessment summary form represents research in the area 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 team should review 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 an articulation/phonological impairment does not guarantee the student's eligibility for special education. Virginia criteria, including educational impact caused by the impairment and need for specially designed instruction, must be met in order for a student to be eligible for special education and related services.

Articulation/Phonological Considerations

Some areas of assessment may require additional consideration depending on the age of the student. The following guidelines may be helpful when:

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.

Evaluation Data

Evaluation data should be gathered from four areas for comprehensive assessment: Academic activities, academic tests and measures, SLP probes, and SLP test and measures. Virginia 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.

Comprehensive Assessment Data Sources

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, PALS assessments, SOL, benchmark tests, pre-referral intervention data should also be reviewed. Any speech production errors evident in written work samples or artifacts should be noted.

In addition to providing valuable insight into the student's abilities, this data also provides support for *determination of educational impact* which is required by Virginia regulation.

Intelligibility:

Teachers play an important role in documenting intelligibility in the education 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[1] (Overby et al, 2007).

Ratings of intelligiblity should be made using connected speech . For young students who are highly unintelligible, Gordon-Brannan and Hodson[2] (2000) suggest an alternative measure of intelligiblity 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.

[1] Overby, M. Carrell, T , Bernthal, J (2007)Teachers' Perceptions of Students With Speech Sound Disorders: A Quantitative and Qualitative Analysis University of Nebraska–Lincoln *Language, Speech, and Hearing Services in Schools* Vol.38 327-341 October 2007

[2] Gordon-Brannan, M. and Hodson, B.W. (2000) Intelligibility/Severity Measurements of Prekindergarten Children's Speech *American Journal of Speech-Language Pathology, 9,* 141-150

Speech-Language Pathology Probes, 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. Use of the Iowa-Nebraska Norms is recommended.

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 (I-N) norms (Smit, et al, 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 I-N 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 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.[3]

[3] Klein, E., Flint, C. (2006) Measurement of Intelligibility in Disordered Speech *Language, Speech, and Hearing Services in Schools* Vol.37 191-199 July 2006

Processes like unstressed syllable deletion, reduplication, and assimilation often disappear before age 3, while cluster simplification, gliding of liquids, vocalization and stopping tend to persist the longest, up to age 5 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.

Descriptions and examples of phonological processes are provided in the special topics section of this document. Free online training modules on Phonological Processes are available from www.ttaconline.org.

Stimulability:

Stimulability is an important factor when determining the level of impairment and when documenting the need for specially designed instruction. Data suggests 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 (Miccio, A.W., 2002). 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.[4] 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 nonsense syllables. Those sounds imitated correctly some of the time (at least 30 percent of possible opportunities) are presumed to be stimulable.
2. Provide the student 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, the probe may be shortened by administering only one vowel context during the initial assessment.

Percentage of Consonants Correct:

Percentage of Consonants Correct (PCC) yields severity ratings on a 4-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 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

[4] *Clinical Problem Solving: Assessment of Phonological Disorders.* Volume 11, Issue 3. Pages 221 - 229. August 2002

speech.[5] 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 tape-recorded speech sample:
    a. 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).
    b. 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.
2. Only consonants are scored, not vowels (i.e., only the consonantal /r/ is scored).
3. Score only the first production of a consonant if a syllable is repeated (e.g., ba-balloon. Score only the first production of /b/).
4. Do not score consonants if a word is unintelligible or only partially intelligible.
5. Errors include substitutions, deletions, distortions, and additions. Voicing errors are only scored for consonants in the initial position of words.
6. 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").
7. Dialectal variations are not scored as errors.
8. To determine the PCC value use the following formula:

$$\frac{\textbf{Number of Correct Consonants}}{\textbf{Total Number of Consonants}} \times 100 = \textbf{PCC}$$

[5] Johnson, C., Weston, A, Bain, B. (2004) An Objective and Time-Efficient Method for Determining Severity of Childhood Speech Delay American Journal of Speech-Language Pathology • Vol. 13 • 55–65

Iowa - Nebraska Articulation Norms[6]

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;0	3;0
/n/	3;6	3;0
/ŋ/	7;0	7;0
/h-/	3;0	3;0
/w-/	3;0	3;0
/j-/	4;0	5;0
/p/	3;0	3;0
/b/	3;0	3;0
/t/	4;0	3;6
/d/	3;0	3;6
/k/	3;6	3;6
/g/	3;6	4;0
/f-/	3;6	3;6
/-f/	5;6	5;6
/v/	5;6	5;6
/θ/	6;0	8;0
/ð/	4;6	7;0
/s/	7;0	7;0
/z/	7;0	7;0
/ʃ/	6;0	7;0
/tʃ/	6;0	7;0
/dʒ/	6;0	7;0
/l-/	5;0	6;0
/-l/	6;0	7;0
/r-	8;0	8;0
/ə˞/	8;0	8;0

Word-Initial Clusters	Age of Acquisition (Females)	Age of Acquisition (Males)
/tw kw/	4;0	5;6
/sp st sk/	7;0	7;0
/sm sn/	7;0	7;0
/sw/	7;0	7;0
/sl/	7;0	7;0
/pl bl kl gl fl/	5;6	6;0
/pr br tr dr kr gr fr/	8;0	8;0
/θr/	9;0	9;0
/skw/	7;0	7;0
/spl/	7;0	7;0
/spr str skr/	9;0	9;0

Note regarding phoneme positions:

/m/ refers to prevocalic and postvocalic positions
/h-/ refers to prevocalic positions
/-f/ refers to postvocalic positions

[6] Smit, Hand, Freilinger, Bernthal, and Bird (1990). Journal of Speech and Hearing Disorders, 55, 779-798.

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											
θ											
ð											
f											
v											
s											
z											
ʃ											
ʒ											
tʃ											
dʒ											
m											
n											
ŋ											
w											
j											
h											
l											
r											

Percentage Consonants Correct (PCC)

Child: _____ **Date of Birth:** _____

PCC Scoring Date: _____ **Speech-Language Pathologist:** _____

Consonant Class	Consonant Sound	Initial	Medial	Final	Number of Consonants Correct	Total No. Consonants
Nasal	/m/					
	/n/					
	/ŋ/					
Glides	/w/					
	/j/					
Stops	/p/					
	/b/					
	/t/					
	/d/					
	/k/					
	/g/					
Fricatives/ Affricates	/f/					
	/v/					
	/ʃ/					
	/ʒ/					
	/s/					
	/z/					
	/j/					
	/θ/					
	/ð/					
	/dʒ/					
	/h/					
Liquids	/l/					
	/r/					
				TOTALS		

Number of Correct Consonants / **Total Number of Consonants** **X** **100 =** **PCC**

Speech Production Assessment Summary

Name: _____ **Date:** _____

Review all assessment data 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 completion of the Functional Communication Summary form.

	Academic Activities, Tests, and Measures		**SLP Probes, Tests and Measures**			
			Speech Sound Production			
	Data sources include classwork and observations of oral, & written language in school settings	Intelligibility in connected speech across settings	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
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% 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 – 89% stimulable	PCC value of 85 – 94%
Moderate Impact	Evidence of struggles in most areas when compared to peers	Age 3: 50 – 64% Age 4: 65 – 74% 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 - 59% stimulable	PCC value of 50 – 84%
Substantial Impact	Evidence of very limited ability in most areas	Age 3: <50% Age 4: <65% Age 5+ : <70%	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 less than 50% stimulable	PCC value less than 50%

Phonological Process Abbreviations:

CR – cluster reduction
WSD – Weak syllable deletion
FR – Fronting
Gliding- Gliding of liquids
DEP- depalitization of singletons
FCD- final consonant deletion
ICD- initial consonant deletion

Language Assessment Summary

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 due to sociocultural dialects are not automatically considered to be students with a speech-language impairment. The presence of a language impairment does not guarantee the child's eligibility for special education.

Evaluation Data

Evaluation data should be gathered from four areas for comprehensive assessment: academic activities, academic tests and measures, SLP probes, and SLP test and measures. Virginia 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 the summary, data should be based on the child's performance in his/her preferred mode of communication (e.g., American Sign Language, augmentative/alternative communication). This should be documented in the evaluation report, eligibility minutes, 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.

Comprehensive Assessment Data Sources

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 meta cognitive, meta linguistic, and meta pragmatic skills should be included as part of this data source.

In addition to providing valuable insight into the student's abilities, this data also provides support for *determination of educational impact* which is required by Virginia regulation.

Academic Tests and Measurements

Data sources include norm-referenced achievement tests, SOL, benchmark tests, and pre-referral intervention data. In addition to providing valuable insight into the student's abilities, this data also provides support for *determination of educational impact* which is required by Virginia regulation.

Speech-Language Pathology Probes

Multiple data sources should be gathered 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, syntax, morphological, and phonological skills. Additionally, data on meta-linguistic, meta-cognitive, and meta-pragmatic skills should be gathered through interviews and systematic observations.

Speech-Language Pathology Norm-Referenced Tests and Measurements
Data sources include multiple norm-referenced tests with appropriate sensitivity and specificity (Spaulding 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 eligibility decision-making.

Norm-referenced tests must be administered in a standardized manner and norming populations must match the student being evaluated. Any variation from standard administration procedures (e.g., repetition, cues, additional time, etc.) invalidates scoring and results in a nonstandard administration. Virginia regulations require information about nonstandard administrations be described in the evaluator's report. The findings of strengths and weaknesses can be described, but no score should be reported.

Language Assessment Summary

Name: _____ **Date:** _____

Review all assessment data 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 completion of the Functional Communication Summary form.

	Academic Activities Data sources include classwork, homework, and observations of oral, written and pragmatic language in school settings	**Academic Tests and Measurements** Data sources include achievement tests, SOL, benchmark tests, and pre-referral intervention data	**Speech-Language Pathology Probes** Data sources include language samples, interviews, case history and dynamic assessment data	**Speech-Language Pathology Norm-Referenced Tests and Measurements** Data sources include multiple norm-referenced tests with appropriate sensitivity and specificity
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	1 or 2 composite scores* at or above: • mean to -1 SD • $\geq$ 85 SS # • $\geq$17th %ile
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 syntax- morphological skills	1 or 2 composite scores* documenting: • -1 to -1.5SD • 84 to 77 SS # • 16th-7th %ile
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 syntax- morphological skills	1 or 2 composite scores* documenting: • -1.5 to -2 SD • 76-70 SS # • 6th -3rd %ile
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 syntax- morphological skills	1 or 2 composite scores* documenting: • -2 or greater SD • 69 or below SS # • below 3rd %ile

*These scores should be composite scores from the full battery of subtests, not individual subtest scores.
This example assumes a mean of 100 and standard deviation of 15 points. See page 29.

Fluency Assessment Summary

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/or academic and vocational achievement.

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. Virginia 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, SOL, 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, this data also provides support for *determination of educational impact* which is required by Virginia regulation.

Speech-Language Pathology Probes, Norm-Referenced Tests & Measurements

Data should include frequency of dysfluency, description of dysfluency, associated non-vocal 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 attached form and provide a description of the student's communication skills including information from each of the factors listed in the assessment summary form.

The SLP 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 his/her skills in the five parameters of communication – stuttering, 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-age 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 non-fluent 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 (Runyan, 2004).

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 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 required to speak. Examples include changing words or topics, refusing to participate, social withdrawl, etc.

Fluency Assessment Summary

Name: _____ **Date:** _____

Review all assessment data 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 completion of the Functional Communication Summary form.

	Academic Activities, Tests, and Measures	**SLP Probes, Tests and Measures**			
	Data sources include classwork, homework, and observations of oral, written and 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 2 second pauses OR 5 reiterations	One associated behavior that is noticeable and distracting	Does avoid some speaking situations
Substantial Impact	Evidence of very limited ability in most areas	10% or more vocal dysfluencies per minute OR 11 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 Assessment Summary

A 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 a 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 E.

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. Virginia 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, SOL, benchmark tests, 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 vocal quality and appropriateness compared to peers.

In addition to providing valuable insight into the student's abilities, this data also provides support for *determination of educational impact* which is required by Virginia regulation.

Speech-Language Pathology Probes, 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 attached form and provide a description of the student's communication skills including information from 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 Referral Form Terminology

The following terminology is used on voice referral form.

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 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 – hyper nasality 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. Positive indications might 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 a vowel.

Pitch - consider if 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 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 completion of the Functional Communication Summary form.

	Academic Activities, Tests, and Measures	**SLP Probes, Tests and Measures**			
	Data sources include classwork, homework, and observations of oral, written and pragmatic language in school settings	**Voice Quality** hoarse, breathy, no voice	**Resonance** hypernasal or hyponasal	**Loudness** judged for appropriateness and variability	**Pitch** 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
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 Summary

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 are able to 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 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 include:

Communicative Interaction
Evidenced by: initiation, topic maintenance turntaking, opening/closing conversations

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

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

Comprehension of Language
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 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.

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

APPENDIX E:
Forms and Checklists

Communication Observation Form

Student: _____ **D.O.B.** _____ **Date:** _____

Time: _____ **Length of Observation:** _____ **Grade:** _____

Reason for Observation:_____

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

Physical Environment: Where is student seated? What is the student's proximity to teacher?

- ❑ 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)

Comprehension ❑ Low ❑ High

Verbal Demands ❑ Low ❑ High

Responsiveness to Instructional Strategies:

- ❑ wait time
- ❑ repetition
- ❑ rephrasing
- ❑ visual supports
- ❑ graphic organization

Other:_____

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

Comments:

Summary:

_____ _____

Speech-language pathologist's signature **Date**

Sample Educational Assessment of Communication Skills

Student: _____ **Grade:** _____

Teacher: _____ **Date:** _____

Academic Performance Rating:

	Reading	Writing	Science	Soc. Stud.	Math
Current Grade					
SOL Score					

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.

Do you have difficulty understanding this student?	Yes	No	Sometimes
Does the student avoid speaking in class?	Y	N	S
Do peers tease the student about the way s/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 page 2 of this form.

Sample Educational Assessment of Communication Skills – Page 2

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:_____ **Date:** _____

Please return to:_____ **by:** _____

Preschool Educational Assessment of Communication Skills

Student:_____ **Date of Birth:** _____

Teacher: _____ **Date:**_____

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

The child:	**Yes**	**Sometimes**	**No**
uses social language (hi, by, 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 "wh" questions (what, where, why, how)			
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 s/he talks			
has difficulty following directions			
has difficulty attending If Yes or Sometimes, check all that apply: ❑ one to one ❑ small group ❑ large group ❑ during lengthy instruction ❑ noise in the environment			
has noticeable hesitations, repetitions, or tension when speaking			
has an unusual voice (e.g., hoarse, nasal, high-pitched)			
has a rate or volume that interferes with understanding him/her			

Rate your concern for the child's communication skills. None 1 2 3 A lot

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 he/she is not understood*** (Check all that apply)? ❑ points or gestures
❑ gives up ❑ repeats the words ❑ says different words ❑ other (explain):

Teacher signature: _____ **Date:** _____

Please return to: _____ **by:** _____

Parent Checklist: Speech-Language (School Age)

Student:_____ **Date of Birth:** _____

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 he/she is thinking and getting to the point			
has trouble making speech sounds; list:			

Rate your concern for the child's communication skills. None 1 2 3 A lot

Do the child's communication skills influence his/her adult and peer relationships or participation in activities? ❑ Yes ❑ No If YES, explain:

Please share information you think would be helpful on the back of this form.

Please return to: _____ **by:**_____

Parent Checklist: Speech-Language (Preschool)

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

Person completing this form: _____ **Date:** _____

Your input will help us understand your child's speech skills. Please check the following. 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 (what, where, why, how)			
uses pronouns correctly (I, me, we)			
knows some songs or nursery rhymes			
participates in pretend play			

Rate your concern for the child's communication skills. None 1 2 3 A lot

What does the child do ***when he/she 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: _____ **Date of Birth:** _____

Person completing this form: _____ **Date:** _____

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

My child....	Yes	Sometimes	No
repeats whole words "why, why, why, why"			
repeats parts of words			
reports sounds "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 with similar difficulty			
has vocal tension			
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: _____ **Date of Birth:**_____

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:_____ **Grade:** _____

Teacher: _____ **Date:** _____

Directions: Please read and check the box that is the best answer to each question. (If student needs 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?				

(Please complete Page 2)

Student Speech-Language Checklist Kindergarten through 5th Grade – Page 2

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 through 12th Grade

Student:_____ **Grade:**_____

Teacher:_____ **Date:**_____

Directions: Please read and check the box that best answers each question. (If student needs 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?				

(Please complete Page 2)

Student Speech-Language Checklist: 6th through 12th Grade – Page 2

	Yes	No	Sometimes	Don't Know
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?				

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: _____ **School Year:** _____ **Grade:** _____

IEP Due Date: _____ **SLP Services listed on IEP:** _____

Teacher(s): _____

Response Key:	**+ Correct**	**⊕ Correct w/ cue**	**- Incorrect**	**⊖ Incorrect w/ cue**

Date	**Goal/Objective**	**Response**					**Observations**

Speech-Language Therapy Log for _____ School Year

Student Name: **DOB:** **Grade:**

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

IEP Date Due: **Triennial 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
Sept																															
Oct																															
Nov																															
Dec																															
Jan																															
Feb																															
Mar																															
Apr																															
May																															
Jun																															

Date	Data	Therapy Target and Results

Student Name: _____ **School Year:** _____

Date	Data	Therapy Target and Results

Data Analysis Graph with Aim and Trend Lines

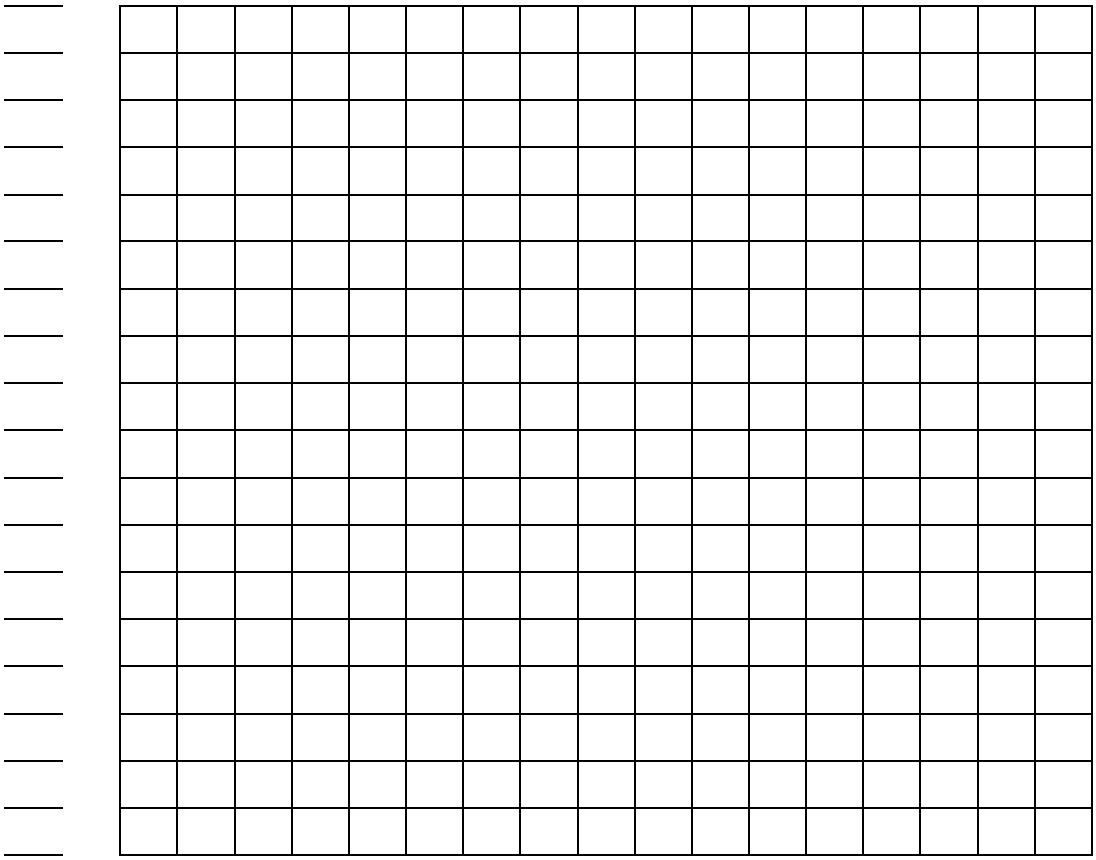
Student: _____ **Date:** _____

Use this form to graph aim and trend lines and document student progress over time. Label the dates for data point 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 ____/____/____.



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

Baseline: Calculate 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:_____ **Date:** _____

Speech-Language Pathologist: _____ **Nurse:** _____

Occupational Therapist: _____ **Teacher:** _____

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

Swallowing Team Actions	**Decision**	**Date**
Parent/Guardian informed of concern	☐ Yes ☐ No ☐ N.A.	
Interdisciplinary consultation conducted	☐ Yes ☐ No ☐ N.A.	
Individual Health Care Plan Developed	☐ Yes ☐ No ☐ N.A.	
Referral made to physician for clinical evaluation	☐ Yes ☐ No ☐ N.A.	
Studies conducted (MBSS attended by case manager)	☐ Yes ☐ No ☐ N.A.	
IEP/504 Team meeting held on ____/____/____ attended by: ☐ Classroom teacher ☐ Administrator ☐ SLP ☐ Nurse ☐ Occupational therapist ☐ Parents/Guardians ☐ Other: _____	☐ Yes ☐ No ☐ N.A.	
Physician referral for special diet received	☐ Yes ☐ No ☐ N.A.	
School cafeteria manager and parent notified of diet order	☐ Yes ☐ No ☐ N.A.	
Diet change started at school:	☐ Yes ☐ No ☐ N.A.	
Training is conducted on feeding techniques and emergency plan: ☐ Classroom teacher ☐ Administrator ☐ Paraprofessional ☐ SLP ☐ Nurse ☐ Occupational therapist ☐ Parents/Guardians ☐ Other: _____	☐ Yes ☐ No ☐ N.A.	
Feeding plan initiated:	☐ Yes ☐ No ☐ N.A.	

Swallowing Disorder Consultation and Referral Form

Part 1: Referral to School-based Swallowing Team

Student: _____ **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:	

Swallowing Disorder Consultation and Referral Form

Part 2: Interdisciplinary Swallowing Consultation

Student:_____ **Consultation Date:** _____

Date of birth: _____ **Physician:** _____

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 ☐ step	☐ gesture/imitation ☐ 2 step	☐ none ☐ complex
Vision:	☐ no known deficit	☐ deficit:	
Abnormal reflexes observed:			
Trunk:	☐ excessive extension ☐ kyphosis	☐ dystonia ☐ asymmetric	☐ scoliosis ☐ Other:
Head Control:	☐ adequate ☐ poor ☐ receives manual positioning ☐ excessive head/neck hyper extension		☐ receives external positioning ☐ reflexive position patterns
Facial:	☐ asymmetric ☐ increase tone ☐ open mouth posture	☐ contortions ☐ decrease tone ☐ other:	☐ jaw extensions ☐ grimaces/tics
Breathing Patterns:	☐ mouth breather ☐ tracheostomy*	☐ audible inhalation ☐ ventilator *	☐ nasal congestion

* If tracheostomized and/or ventilator dependent, consideration for medical consultation is advised prior to feeding trials.

Swallowing Disorder Consultation and Referral Form

Part 2: Interdisciplinary Swallowing Consultation *continued*

OBSERVATION OF FEEDING:

The student displayed the following during this consultation: _____

During this assessment the student was fed by: _____

Positioning: ☐ Chair ☐ Wheelchair ☐ Tumbleform ☐ Other: _____

Utensils used (including adaptive utensils) : _____

FEEDING TRIAL DATA:

List of liquids and foods used_____

Key: (+) present (-) not present (DNT) did not test/observe

	Indicate food consistency				Indicate observed behaviors	Additional Comments
	Liquid	Puree	Soft	Solid		
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:

Swallowing Disorder Consultation/Referral Form

Part 3: Request for Physician Input Regarding Swallowing Concerns

Student: _____ Date: _____

Student Date of Birth: _____

Dear Dr. _____,

Your patient was observed during speech and/or occupational therapy on _____ due to feeding and swallowing concerns. The clinical indication(s) of oral pharyngeal dysphagia (with possible aspiration) included:

- ☐ Pneumonia (current of 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 | Fax

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's Signature: _____ **Date**: _____

Voice Referral Form

Part I. General Information

Student's Name: _____ **Gender:** _____ **DOB:** _____

Address: _____ **Parent's Name:** _____

School: _____ **Grade:**_____

Speech-Language Pathologist: _____ **Date:** _____

Part II. Speech-language evaluation results (completed by a Speech-Language Pathologist)

Reason(s) for referral: _____

Student's complaint (if any): _____

Brief description 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, and **X** = Not Observed).

Quality (breathy, hoarse, harsh) _____

Pitch (too high/ too low) _____

Nasal resonance (hypo-/hypernasal/mixed)_____

Loudness (too soft/ too loud)_____

Pitch breaks _____

Glottal attack (hard/soft) _____

Muscle tension _____

Oral resonance _____

Phonation breaks _____

Breathing pattern _____

Abusive vocal behaviors _____

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. To be completed by the parent or caregiver

Instructions: Please circle "yes" or "no" and provide additional information as needed.

Does your child's voice sound like that of other family members?		Yes	No
Has he/she had frequent ear infections?		Yes	No
Does he/she have a sore throat frequently?		Yes	No
Does he/she have allergies?		Yes	No
Does he/she often breathe through the mouth?		Yes	No
Does he/she snore while sleeping?		Yes	No
Does your child seem unusually tense when speaking?		Yes	No
Have you noticed that your child has a persistent voice problem?		Yes	No
If yes	Does your child's voice sound hoarse?	Yes	No
	Does your child seem short of breath when speaking?	Yes	No
	Does your child's voice sound as though it is coming through his/her nose rather than through the mouth?	Yes	No
	Does your child's voice sound as though he/she has a stopped-up nose?	Yes	No
	Does your child's voice sound worse in the morning?	Yes	No
	Does your child's voice sound worse in the evening?	Yes	No
	Does your child seem to speak more loudly than necessary?	Yes	No
Has he/she had a serious injury to the neck?		Yes	No
	to the head?	Yes	No
	to the chest?	Yes	No
Has your child had any surgery to the lips, mouth, throat, or ears?		Yes	No
If yes, please describe and include dates			
Does your child have any problems swallowing?		Yes	No
Does he/she often have heartburn or acid indigestion?		Yes	No
Does your child use tobacco products?		Yes	No
Does your child consume caffeinated drinks?		Yes	No
Does he/she consume alcoholic beverages?		Yes	No
Is your child in choral groups, cheerleading, or other talkative activities?		Yes	No
Is your child frequently exposed to dust, mold, or air-borne chemicals?		Yes	No
Does he/she have any other health problems?		Yes	No
Describe: _____			
Is your child currently taking any medications?		Yes	No
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: To be completed by a 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? Please specify type and location.	☐Yes ☐No
Are there vocal fold asymmetries during phonation? If yes, please describe	☐Yes ☐No
Is there evidence of inadequate velopharyngeal function? If yes, please describe	☐Yes ☐No
Is there obstruction(s) of the nasal passages? If yes, please explain	☐Yes ☐No
Is there presence of any sinus infection or nasal allergy?	☐Yes ☐No
During phonation did the vocal folds exhibit normal amplitude?	☐Yes ☐No
Is there evidence of excessive muscular tension during phonation?	☐Yes ☐No
How were the vocal folds visualized during the examination?	
What is your medical diagnosis?	
Are there any contraindications for voice therapy?	☐Yes ☐No
How may the Speech-Language Pathologist best contact you for consultation if needed? Phone #: _____ E-mail: _____ (with parental consent) Examining Physician's Signature: _____ Date: _____ Please return this form to: _____ at _____ (fax) or _____ (address). Thank you.	

Notes