

# Issue Brief on Personnel Preparation and Credentialing in Speech-Language Pathology

Prepared for the Center on Personnel Studies in Special Education

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COPSSE research is focused on the preparation of special education professionals and its impact on beginning teacher quality and student outcomes. Our research is intended to inform scholars and policymakers about advantages and disadvantages of preparation alternatives and the effective use of public funds in addressing personnel shortages.

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## **ABSTRACT**

The complexities of caseloads and the roles and responsibilities of school-based speech-language pathologists have expanded significantly in the past decade. This paper examines issues related to: (a) undergraduate, graduate, and on-the-job personnel preparation; (b) certification and licensure; and (c) supply and demand of qualified providers. Findings suggest that the majority of graduate programs in communication sciences and disorders train generalists who may not be prepared for the unique demands of employment in schools. In addition, on-the-job training is complicated by the practice of assigning professionals from other fields to supervise new speech-language pathologists. Further, alternate certification programs geared for working professionals may sacrifice quality for expediency. Inadequately trained personnel hired under emergency certificates, waivers, or some state teacher requirements may be unequipped to handle the responsibilities of a school-based speech-language pathologist. Additional findings and key research questions are discussed.

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## INTRODUCTION

Over the past several decades, speech-language services in the schools have undergone profound fundamental changes in scope and focus. Legislative, regulatory, societal, professional, medical, and demographic influences have converged to shape and define practice as we know it today (Whitmire, 2002). The challenges and demands of school settings call for special attention to preparation, recruitment, and retention of qualified personnel to meet the needs of students with communication disorders. This paper will examine these issues as they relate to: (a) personnel preparation at the undergraduate, graduate, and on-the-job levels; (b) certification and licensure; and (c) supply and demand of qualified providers.

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## PERSONNEL PREPARATION

The roles and responsibilities of school-based speech-language pathologists (SLP) have expanded significantly in the past decade, and caseloads have become more complex (American Speech-Language-Hearing Association [ASHA], 1999, 2000a, 2001c, 2001d, 2002b). (See **Appendix A**, **Appendix B**, and **Appendix C**). The setting requires sound knowledge of assessment and treatment procedures for a broad range of disorders, including articulation and fluency, autism, cognitively based communication disorders, and dysphagia. It also requires knowledge of issues associated with cultural/linguistic diversity (ASHA, 2000a). In addition, SLPs are involved in the prevention of literacy problems—the identification, assessment, and remediation of spoken and written language problems in preschool, elementary, and secondary students (ASHA, 2001c). Furthermore, they must engage in a wide range of indirect activities to support educational programs and to ensure compliance with federal, state, and local mandates. Many of these expanded roles, which were required or strongly encouraged by the 1997 reauthorization of the Individuals with Disabilities Education Act (U.S. Department of Education [USDOE], 1997) are consistent with current policy and practice in the field of communication sciences and disorders.

Preparing SLPs to meet the demands of school settings is complicated by: (a) undergraduate and graduate program issues related to content, design, and faculty; and (b) on-the-job training and supervision limitations. These factors have long-term and devastating implications for quality speech-language services in the schools.

### Undergraduate and Graduate Training

**Content for generalists versus specialists.** The majority of graduate programs in speech-language pathology are training SLPs to be generalists in the field of communication disorders rather than specialists who work in school settings. This approach provides a solid foundation in communication disorders that clinicians can take into any employment setting. However, this may lead to gaps in professional preparation for the unique challenges and demands particular to school settings.

Eger, Moreau, and Tempalski (2001) surveyed experienced clinicians and verified this weakness of preparing generalists in graduate training. The respondents were 20 SLPs who were certified by the American Speech-Language-Hearing Association (ASHA). On average, these SLPs had 23 years of professional speech-language experience and had supervised 8.6 graduate student clinicians from three universities over 5 years. Rating the skills and qualities of their student clinicians, the certified SLPs indicated that 74% were *adequately to well prepared* to apply academic information to the school setting, such as defining a set of procedures for conducting assessments using standardized tests. However, on more school-specific information (e.g., defining a set of procedures for informal curriculum-based and authentic assessments), they rated only 47% as *adequately prepared* to apply this academic information to the school setting and none as *well prepared*.

A specific area of concern involves service delivery options, because there are significant discrepancies among recommended practice, reported practice, and graduate training. In general, there are *direct* and *indirect* speech and language services. *Direct services* include the pull-out model, the push-in model, the self-contained classroom model, and the co-teaching model. The

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*pull-out model* is the traditional approach to speech therapy in which a student is taken to the therapy room for direct services provided by the SLP. In the *push-in model*, the SLP provides services in the classroom rather than pulling out the student. The *self-contained classroom model*, the most restrictive model, is used selectively for students with severe speech and/or language problems. The *co-teaching model* usually involves the SLP and a classroom teacher working together to teach a language arts curriculum.

*Indirect service* is the other major type of speech and language program. This involves the *collaborative consultation service delivery model*. The SLP collaborates with members of the school team to provide speech and language services to the student. This collaborative model usually involves the technical skills of the SLP for assessing skills and establishing realistic communication goals for the student. Implementation of the goals and strategies is carried out by members of the team throughout the school day and is integrated into the educational curriculum.

It is often appropriate to offer a combination of service delivery options to meet the individual needs of the student, particularly as these needs change over time. For example, the SLP may initially combine individual pull-out therapy with small-group, classroom-based intervention to establish some prereading language skills in the child. As skills develop, the SLP may drop pull-out, observe the child during classroom lessons, and consult with the classroom teacher on effective teaching strategies to improve the child's literacy skills. The SLP may also modify instructional materials and conduct a staff inservice on the language-literacy connection.

Despite 20 years of policy and practice guidelines encouraging an integrated and comprehensive approach to service delivery (Frasinelli, Superior, & Myers, 1983; Nietupski, Scheutz, & Ockwood, 1980; Eger, 1992; ASHA, 1993; Blosser & Kratcoski, 1997), data from the schools indicate a skewed use of service delivery options. The 1995 ASHA Survey of Speech-Language Pathology Services in School-Based Settings (Peters-Johnson, 1998) in **Appendix D** strongly demonstrates that, except for the birth-to-2 age group, the traditional pullout (TP) model is used most frequently. In fact, in the 6-11 and 12-17 age groups, TP was used 78% and 65% of the time, respectively. The percentages of respondents using the TP model were even higher when data were grouped according to type of communication disorder (**Appendix E**).

A similar pattern was seen 5 years later in the ASHA 2000 Schools Survey (ASHA, 2001a) in which TP was the most commonly used model of service delivery. Respondents indicated that in 87% of the cases, the clinician is responsible for determining the type of service delivery model. This is significant for the preparation of SLPs. In the survey of school clinicians rating graduate student clinicians (Eger, et al., 2001), the data suggest that students are primarily trained to utilize the pull-out model of service delivery. About 86% of student clinicians were rated *adequately to well prepared* in applying academic information to the school setting in the area of individual or small group (pull-out) therapy. However, only about 35% of these same student clinicians could *adequately* apply academic information to the school setting in the area of classroom (push-in) therapy or consultation with the education team. Again, none was rated as *well prepared* in these two service delivery models.

Preparation for SLPs must also include: (a) knowledge of curriculum and instruction, (b) skills in professional collaboration in planning and providing services, (c) training in strategies and techniques for working in educational settings, and (d) supervised experiences in general education settings (since traditional university-based clinics do not provide adequate experience with current service delivery models and collaboration in the development and implementation

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of assessment and intervention plans). This content should be infused into academic course work in communication sciences and disorders and through integration with general education preparation programs. Such preparation is often not found in programs for communication sciences and disorders programs.

**Program designs for preparation for school-based practice.** Programs that do provide training relevant to practice in school settings follow several designs. Some offer undergraduate and graduate course work tied to specific requirements for state teacher certification. This track may include: (a) a course in organization and management of speech-language services in the schools, (b) course work in child development and pedagogy, and/or (c) a clinical practicum experience in a school setting (i.e., student teaching). Other programs offer streamlined training to upgrade professionals with temporary or provisional certification so they are eligible for permanent teacher certification. Still other programs offer course work needed for licensed and/or ASHA-certified SLPs to qualify for state teacher certification. Unfortunately, certification programs for working professionals often are not part of an institutions' accredited degree program and are typically designed to meet minimum requirements in a minimum amount of time. These programs may sacrifice quality and comprehensiveness for expediency.

**Shortage of doctoral-level faculty.** A shortage of doctoral-level faculty in communication sciences and disorders is affecting undergraduate and graduate training in speech-language pathology. There is a substantial disparity between the current number of individuals with doctorates pursuing careers in higher education and the current/future demand for such faculty. From 1993 to 1998, the number of doctoral degrees in communication sciences and disorders dropped by 11.3% and continued to drop over the next 3 years (Boswell, 2001). At this time, there are 333 unfilled slots for students in doctoral programs in communication sciences and disorders. Typically, 1–2 years pass before a faculty position is filled with a qualified individual. The impact of the shortage of Ph.D. students and faculty is widespread (ASHA, 2002a). The inability to recruit new Ph.D. faculty is already putting some academic programs at risk for closure. This means potentially fewer trained professionals available for employment. Fewer Ph.D. faculty also means fewer research projects in communication sciences and disorders, leading to a slowed growth in our understanding of human communication and a longer time to develop and test improvements of treatment options. Fewer Ph.D. faculty means fewer opportunities for doctoral study, meaning fewer Ph.D. faculty in the future. Furthermore, this shortage is expected to increase due to the peaked age distribution of faculty members who will be retiring in the next few years. Over the next 15 years, preliminary estimates project that the shortage of Ph.D. faculty is likely to become so severe as to require massive restructuring in the field, resulting in program closures and reductions in the proportion of faculty holding the Ph.D.

**Supervision for on-the-job training.** Although on-the-job training is not unique to school-based settings (Rosenfeld & Kocher, 1999), three factors related to the schools have long-term impacts on the quality of speech and language services. The first is that most graduate education programs do not include specific content on school-related roles and tasks. This includes: (a) curriculum-based assessment, (b) development and implementation of educationally relevant intervention plans, and (c) implementation of specially designed instruction to remediate or circumvent severe language problems in the classroom. The fact that graduate students are not receiving this content was verified in a survey by Eger, et al. (2001). These skills must be learned on the job.

The second issue is that the difficulties associated with on-the-job training in school-specific skills are exacerbated by the fact that many school systems have professionals from other fields



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supervising SLPs. Only 23% of respondents to ASHA's 2000 Schools Survey reported being supervised by a speech-language pathology supervisor; the remainder were supervised by a special education coordinator or school principal (ASHA, 2001b). If there is no speech-language supervisor to assist with proper mentoring of a new staff member, school-specific content is never learned.

The third issue that has long-term impact on the quality of school speech-language services is that many school systems, especially smaller districts, do not have a supervisor or peer with ASHA's Certificate of Clinical Competence in Speech-language Pathology (CCC-SLP). Because school systems cannot (and should not) hire entry-level graduates who need to complete a clinical fellowship year under the direct supervision of an ASHA-certified SLP for ASHA certification, the pool of qualified candidates is limited further.

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## CERTIFICATION AND LICENSURE

The credentials held by speech-language clinicians working in the schools vary according to state requirements. Possible credentials include ASHA's CCC-SLP, a state license, and a state teacher certificate. This variability has created concerns regarding the qualifications of school personnel and barriers to the hiring of qualified personnel due to issues of reciprocity.

### ASHA's Certificate of Clinical Competence

ASHA's CCC-SLP sets the standard for entry-level requirements for the practice of that profession. Requirements for ASHA's CCC-SLP include: (a) a graduate degree, (b) 21 graduate semester hours and a total of 350 practicum hours with at least 250 practicum hours obtained in a graduate program accredited by the ASHA Council for Academic Accreditation (CAA), (c) a passing grade on the Praxis examination in speech-language pathology, and (d) successful completion of a clinical fellowship under the supervision of an ASHA-certified SLP.

### State Licensure and Teaching Certification

Some states have what is known as *universal licensure*, a state license that is required to practice in all settings and is typically issued and administered by state departments of professional regulation. In other states, school practitioners are exempt from the state licensing law; however, they must meet separate state department of education requirements to obtain teacher certification. A few states require both state licensure and teacher certification or state licensure plus education-specific course work and examinations (ASHA, 2001e).

Requirements for most state licenses are similar or equivalent to those for ASHA's CCC-SLP. In fact, some states will automatically grant licensure if the applicant holds the CCC-SLP. Teacher certification, on the other hand, varies across states in terms of requirements for masters degrees (e.g., may be a degree in a field related to communication disorders), clinical practicum (i.e., must include experience in a school setting), course work (e.g., courses in pedagogy and child development), and examinations (e.g., a passing grade on a state teachers exam).

In 36 states, individuals entering the public school system must have at least masters degrees to work as SLPs (ASHA, 2001e). Of those 36 states, 7 require practitioners to be state-licensed or to meet requirements over and above a masters. Even in states that require incoming personnel to have at least a masters degree, there are still SLPs who entered the school system when only bachelors degrees were required. Many states have set dates by which these SLPs must receive masters degrees. Approximately 14 states allow bachelors-level personnel to start work in public schools as SLPs. However, several of these states require that individual SLPs be enrolled in masters programs and complete that program within a certain time. A few of these states will only allow such SLPs to work under emergency certification or when qualified masters-level individuals cannot be located.

The requirements for ASHA's CCC-SLP were established as the *minimum* skills required for entry into the field of SLP. Individuals who hold state teaching certificates with requirements less rigorous than ASHA's CCC-SLP risk lacking the basic skills and knowledge needed to carry out the responsibilities of a speech-language pathologist. Individuals at the bachelors level and/or with emergency certification are clearly not prepared for the demands of broad job responsibilities or a diverse school speech-language caseload.

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## Reciprocity

Reciprocity issues that affect all applicants for state teaching certification also affect SLPs. These include redundant requirements for: (a) fully qualified and credentialed candidates from other states, (b) late budget decisions, (c) teacher transfer provisions that push new hiring decisions into August or September, and (d) lack of pension portability across states (Darling-Hammond, 2001). In some ways, state teacher certification reciprocity for school-based SLPs is even more complicated than for teachers or special education teachers. Although ASHA's CCC is a national credential, it is *not* universally accepted by state departments of education. The three distinct credentials—the ASHA-CCC, state licensure, and state department of education teacher certification—create confusion for potential school-based SLPs.

Reciprocity issues are further complicated by the fact that many university programs in communication sciences and disorders are not housed in schools of education. This causes three common problems: (a) student teaching may not be specifically listed on the official transcript, (b) course work in education pedagogy may not be required in order to graduate, and (c) confusion exists over the state and national exams that a student should take.

The way student teaching is listed on the official transcript may cause one of two problems. In some instances, it is merely a semantic problem: *student teaching* is noted as a *clinical practicum*. This problem can be resolved by the university. The second and more serious concern is when the applicant may not have met the state requirements for student teaching despite extensive practicum experience. To rectify this situation, an SLP would need to re-enroll in a university program and complete a student teaching requirement to be credentialed to work in schools in that state. For some, this may not be feasible. The lack of required standardized education course work for teacher certification across states causes an additional problem. Some state teacher certification requirements include course work in pedagogy that is not required for state licensure or ASHA's CCCs. Therefore, many students do not take this course work and do not qualify for state teacher certification.

The last problem—confusion over teacher certification tests—is exacerbated because some states require a passing score on general education tests in addition to a specialty area test in speech and language. It is not uncommon that a potential employee in speech and language cannot be credentialed in a reasonable time because he or she has not taken that state's tests.

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## QUALIFIED PROVIDERS: SUPPLY AND DEMAND

Teacher quality and its relationship to student achievement are top priorities in our nation's education agenda. This same priority applies to the hiring of SLPs, who play a key role in helping children succeed in school. SLPs' knowledge of the language-learning-literacy connection equips them to analyze the linguistic demands of the school curriculum and to contribute to students' mastery of that curriculum. However, the recruitment and retention of qualified SLPs is thwarted by rising demands, challenging conditions, and competing options in the work place.

### Studies on Availability and Need

Studies conducted at state and national levels have documented existing difficulties in hiring qualified SLPs (American Association for Employment in Education [AAEE], 2000; ASHA, 2001b; Legislative Office of Education Oversight, 1999; U. S. Bureau of Labor Statistics [BLS], 2001) with projections of increased needs. Fifty-one percent of respondents to ASHA's 2000 Schools Survey indicated a shortage of qualified SLPs in their school district (ASHA, 2001a), with greater shortages in rural and urban areas compared to suburban settings. Reported effects of these vacancies include: (a) increased caseloads, (b) less opportunity for networking and collaborating, (c) decreased opportunities for individual services, (d) decreased quality of services, (e) increased number of staff without ASHA certification/masters-level training, (f) reduced duration or frequency of services, and (g) denial of services to children who need them (ASHA, 2001b; Legislative Office of Education Oversight, 1999).

The Study of Personnel Needs in Special Education (SPeNSE, 2002) conducted by the U. S. Department of Education's Office of Special Education Programs reported 11,148 job openings for SLPs in schools for the 1999-2000 academic year. The greatest barrier to recruiting SLPs was the shortage of qualified applicants, with 59% of respondents reporting this factor as having the greatest impact on shortages.

The American Association for Employment in Education (AAEE) (2000) lists speech-language pathologists as ranking third in the nation in 1998 for number of vacancies as compared to other areas in the teaching field. Of the 11 geographic regions surveyed, 7 fell in the *considerable shortage* category; no region placed in the *balanced* or *surplus* category for SLPs.

According to the U. S. Bureau of Labor Statistics (BLS) (2001), the employment of SLPs is expected to grow much faster than other occupations through the year 2010. In their estimates, speech-language pathology ranks 25<sup>th</sup> out of the 700 occupations and 11<sup>th</sup> out of the 68 health-related occupations in terms of growth. According to the BLS, more than 34,000 additional SLPs will be needed to fill the demand between 2000 and 2010—a 39% increase in job openings. A total of 57,000 job openings for speech-language pathologists are projected between 2000 and 2010 due to growth and net replacements.

Although the U. S. is the most demographically diverse nation in the world (Deal-Williams, 2002), that diversity is not reflected among practitioners, graduate student populations, or program faculty. According to the 2000 U. S. Census, 77.5% of the U. S. population is white; in contrast, membership counts indicate that 95% of ASHA members are white. Data from the Council of Academic Programs in Communication Sciences and Disorders show that 93% of faculty in communication sciences and disorders are white, and 89% of masters-level students

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are white. Furthermore, anecdotal reports suggest that many minority students do not remain in those programs through graduation (Deal-Williams, 2002).

These data suggest a continuation of the current critical shortage for bilingual speech-language pathologists. Ninety-eight percent of ASHA members report that they are monolingual English speakers. Although 10.5% of the U. S. population speaks Spanish in the home, only .6% of ASHA members report speaking Spanish (Deal-Williams, 2002). The lack of diversity in our graduate programs' students and faculty also raises questions about the preparation of *all* students to work with diverse populations. Such a disparity suggests weaknesses in: (a) exposure to diverse populations, (b) curricula and clinical training regarding diversity, and (c) research on culturally and linguistically diverse populations.

## **Challenges to Working in School Settings**

Challenges facing school-based SLPs are one possible explanation for the difficulty in recruiting and retaining qualified applicants (ASHA, 2000b; ASHA, 2001b; Legislative Office of Education Oversight, 1999). These challenges include: (a) excessive paper work; (b) lack of time for planning, collaboration, and meeting with teachers and parents; (c) high caseloads; (d) extensive traveling between buildings or sites; (e) little or no clerical assistance; (f) lack of parental involvement and support; (g) low salaries; (h) inadequate work space and facilities; (i) limited access to technology; (j) lack of training for special populations; and (k) lack of administrative support.

One of the greatest barriers to maintaining qualified and experienced clinicians in the schools is the lack of portability across school systems and work settings. Schools seldom give new employees credit for their experience. Even experienced school clinicians moving to a new area or a new job often start on the first step of the salary scale of a teacher's contract or receive limited credit for years of experience. In contrast, SLPs in medical settings or private practice are typically paid for previous experience. In addition to salary portability issues, pension portability issues for school-based speech-language pathologists are similar to the ones noted by Sindelar, Bishop, Gill, Connelly, and Rosenberg (2003).

When frustrated by these barriers to providing quality services to children, SLPs have the option of employment in other settings, e.g., hospitals, long-term health care, private practice, or higher education.

## **Recruitment and Retention of Qualified Personnel**

Recent studies have focused on strategies that school districts have implemented to recruit and retain qualified personnel (e.g., Bergeson, Douglas, & Griffin, 2000; Darling-Hammond, 2001; Urban Teacher Collaborative Report, 2000). In addition to strategies for attracting classroom teachers, there are specific strategies for recruiting and retaining qualified SLPs. These include: (a) salaries commensurate with the level of training required for the profession; (b) higher salary schedules; (c) salary supplements similar to those for National Board Certification; (d) clerical assistance and computers; (e) reasonable and manageable caseloads that allow services to be delivered based on individual needs and time to accomplish all responsibilities required of the school-based SLP; (f) better facilities for intervention and office work; (g) streamlined paper work, particularly for documenting therapy treatment for Medicaid reimbursements; (h) travel time between assigned schools; (i) time to meet with teachers to consult and plan collaborative

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services; (j) recruitment at colleges and universities with communication disorders departments; (k) recruitment through national ads (e.g., ASHA's online career web site); (l) reimbursement for professional dues; and (m) release time and funding for profession-specific staff development.

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## SUMMARY AND KEY RESEARCH QUESTIONS

The preparation of qualified SLPs equipped for the demands of today's schools is affected by a number of legislative, societal, professional, medical, and demographic influences. The issues presented in this paper include:

1. The complexities of caseloads and the roles and responsibilities of school-based SLPs have expanded significantly in the past decade.
2. Most graduate programs in communication sciences and disorders train generalists who may not be prepared for the unique demands of employment in the schools (e.g., curriculum-based assessments, classroom-based interventions, collaborative consultation).
3. Certification programs for working professionals that are not a part of an institution's accredited degree program may sacrifice quality and comprehensiveness for expediency.
4. Shortages of doctoral-level faculty are putting some academic programs at risk of closure, resulting in fewer trained professionals available for employment as well as reductions in the proportion of faculty holding the Ph.D.
5. Adequate on-the-job training of school-specific skills is complicated by the common practice of assigning professionals from other fields to supervise SLPs, thereby failing to provide content information and mentoring specific to speech-language services.
6. School districts that do not have an ASHA-certified SLP on staff cannot offer required supervision to graduates who need to complete a supervised clinical fellowship year.
7. Emergency certificates, waivers, and some state teacher requirements result in hiring inadequately trained personnel who are not equipped to handle complex caseloads and expanded job responsibilities of school-based SLPs.
8. Recruitment and retention of qualified speech-language pathologists is thwarted by rising demands, challenging work place conditions (e.g., caseloads, paper work, salaries), lack of reciprocity in certifications, and competing work place options.
9. Our profession is experiencing a critical shortage of culturally and linguistically diverse SLPs, graduate students, and faculty. This has implications for curricula, clinical training, and research as well as skills and knowledge of practitioners.

Key research questions should include:

1. What are the universities currently doing to address the content-specific information needed by entry-level SLPs who choose to work in school settings? What are the barriers to providing the necessary information? What are some efficacious solutions to the barriers?
2. Is it possible to deliver content-specific graduate course work or professional education training via distance learning to SLPs who want to work in the schools? Are state or regional collaboratives possible? What should be included in these courses?
3. Why is the collaborative consultation model of service delivery used so rarely to address the speech and language needs of students in schools? What supports must be in place for successful collaborative consultation? What initiatives are needed to facilitate the use of collaboration as an appropriate delivery of speech and language services?
4. What are the demonstrated outcomes in improving formal literacy measures of elementary students when SLPs, reading teachers, and regular education teachers work together to target at-risk students and to develop prevention programs?

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5. What are additional funding strategies for training clinicians for hard-to-fill positions, including positions for rural and urban school districts and bilingual SLPs?
  6. How can we foster partnerships between the university graduate programs and schools to transfer information between the two settings? What supports have to be in place for these partnerships to be formed and maintained? Are there any collaboratives that can be established at state or national levels to infuse school-specific content into graduate curricula?
  7. What are the deterrents to entering and completing doctoral programs in communication sciences and disorders? What are effective incentives for obtaining a doctoral degree and working in academia?
  8. What strategies are effective for recruiting culturally and linguistically diverse students into our graduate programs? What are the barriers to their completing masters or doctoral degrees?

Assuring that children with communication disorders receive the highest quality of services from adequately prepared personnel will require partnerships among university programs, public schools, and funding agencies. Commitments of time, effort, and financial resources and support are essential. Only then will training programs produce school-based SLPs who are equipped to respond to the needs of diverse caseloads and who seek and maintain employment in the school setting.



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**Appendix A. % of School-Based, ASHA-Certified Speech-Language Pathologists Who Regularly Serve Students with Specific Diagnoses and Average (Mean) Number of Students Served**

DIAGNOSIS	% OF SLPS WHO REGULARLY SERVE STUDENTS	AVERAGE (MEAN) NUMBER OF STUDENTS SERVED
Aphasia	11.2%	3.0
Articulation/phonology	97.2%	23.7
Attention deficit-hyperactivity disorder	90.1%	7.2
Autism/pervasive developmental disorder	82.8%	3.8
Cognitive-communication disorder	68.1%	7.9
Dysphagia	21.3%	3.1
Fluency	80.3%	2.6
Hearing disorders	66.0%	2.9
Learning disabilities	92.4%	15.1
Mental retardation/developmental disability	90.3%	9.4
Motor speech disorders (dysarthria, apraxia)	78.3%	3.5
Myofunctional disorders	21.0%	3.5
Nonverbal, augmentative/alternative communication	61.6%	4.6
Specific language impairment	85.2%	15.1

[ASHA, 2000a]

## Appendix B. Core Roles & Responsibilities of School-Based Speech-Language Pathologists

CORE ROLES	RESPONSIBILITIES
	<i>Intervention Assistance Team / Child Study Team</i>
PREVENTION	Inservice Training Consultation
IDENTIFICATION	Prereferral Interventions Screening: Hearing, Speech, and Language Referral and Consent for Evaluation
	<i>Interdisciplinary Team</i>
ASSESSMENT (Data Collection)	Assessment Plan Assessment Methods Student History Nonstandardized Assessment Standardized Assessment
EVALUATION (Interpretation)	Strengths/Needs/Emerging Abilities Disorder/Delay/Difference Severity Rating Educational Relevance: Academic, Social-Emotional, and Vocational Factors Evaluation Results and Team Recommendations Specific Evaluation Considerations Age Attention Central Auditory Processing Cognitive Factors Cultural and/or Linguistic Diversity/Limited English Proficiency Hearing Loss and Deafness Neurologic, Orthopedic, and Other Health Factors Social-Emotional Factors
	<i>IEP Team</i>
ELIGIBILITY DETERMINATION	Federal Mandates, State Regulations/Guidelines, and Local Policies/Procedures Presence of Disorder Educational Relevance Other Factors

CORE ROLES	RESPONSIBILITIES
IEP/IFSP DEVELOPMENT	Federal Mandates, State Regulations/Guidelines, and Local Policies/Procedures IEP Team, Factors, Components, Caseload Size
CASELOAD MANAGEMENT	Coordination of Program Service-Delivery Options Scheduling Students for Intervention Case Load Size
	<i>Educational Teams</i>
INTERVENTION	<i>For Communication Disorders</i>
	General Intervention Methods Scope of Intervention Communication Language Speech: Articulation/Phonology, Fluency, Voice/Resonance Swallowing
INTERVENTION	<i>For Communication Variations</i>
	Cultural and/or Linguistic Diversity Limited English Proficiency Students Requiring Technology Support
COUNSELING	Goal-Setting and Purpose Referral
	<i>IEP Team</i>
RE-EVALUATION	Triennial Annual Ongoing
TRANSITION	Between levels (birth to 3, preschool, elementary, secondary) Secondary to post-secondary education or employment More-restrictive to less-restrictive settings
DISMISSAL	Federal Mandates, State Regulations/Guidelines, and Local Policies/Procedures Presence of Disorder Educational Relevance Other Factors

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CORE ROLES	RESPONSIBILITIES
	<i>Speech-Language Pathologist</i>
SUPERVISION	Clinical Fellows Support Personnel University Practicum Students Volunteers
DOCUMENTATION AND ACCOUNTABILITY	Federal Mandates, State Regulations/Guidelines, and Local Policies/Procedures Progress Reports Third-Party Documentation Treatment Outcome Measures Performance Appraisal Risk Management

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## Appendix C. Additional Roles and Opportunities for School-Based Speech-Language Pathologists

ADDITIONAL ROLES	OPPORTUNITIES
COMMUNITY AND PROFESSIONAL PARTNERSHIPS	Audiologists Community-based speech-language pathologists Health care providers Media/community Parents/parent groups Preschool personnel Professional organizations Universities
PROFESSIONAL LEADERSHIP OPPORTUNITIES	Specialization Mentor Research School-wide participation
ADVOCACY	Students Programs Facilities

[ASHA, 1999]

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**Appendix D. % of Respondents by Service Delivery Models by Age Groups of Children Served**

AGE GROUPS	SERVICE DELIVERY MODEL				
	TP	SC	CB	CC	RR
Birth—2 years	24	7	17	52	1
3—5 years	50	8	31	10	1
6—11 years	78	2	13	5	2
12—17 years	65	7	17	7	4
18+ years	48	8	23	16	5

Note: TP = traditional pullout, SC = self-contained classroom, CB = classroom-based, CC = collaborative consultation, and RR = resource room.

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## Appendix E. % of Respondents by Various Service Delivery Models and Type of Communication Disorder/ Service

COMMUNICATION/ DISORDER SERVICE	SERVICE DELIVERY MODEL				
	TP	SC	CB	CC	RR
Articulation/Phonology	87	3	6	3	1
Fluency	86	2	5	6	1
Voice	79	3	8	9	1
Language	49	8	33	6	4
Dysphagia	61	9	12	16	2
Aural Rehabilitation Service	58	6	20	15	1
Orofacial Myofunctional	78	5	7	8	1
Augmentative/Alternative Service	29	8	40	21	2
Communication Instruction service	32	9	41	15	3
Cognitive Communication	42	10	31	11	5
Central Auditory Processing	51	5	26	14	3
Other	40	19	17	12	12

Note: TP = traditional pullout, SC = self-contained classroom, CB = classroom-based, CC = collaborative consultation, and RR = resource room.

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