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Knowledge and Skills Needed by Speech- Language Pathologists With Respect to Reading and Writing in Children and Adolescents

Ad Hoc Committee on Reading and Writing

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About This Document

This knowledge and skills document is an official statement of the American Speech-Language-Hearing Association (ASHA). The ASHA Scope of Practice states that the practice of speech-language pathology includes providing services for disorders of “language (i.e., phonology, morphology, syntax, semantics, and pragmatic/ social aspects of communication) including comprehension and expression in oral, written, graphic, and manual modalities; language processing; preliteracy and language-based literacy skills, including phonological awareness” (ASHA, 2001).

The ASHA Preferred Practice Patterns for the Profession of Speech-Language Pathology (1997) are statements that define universally applicable characteristics of practice. ASHA requires that individuals who practice independently in speech-language pathology hold the Certificate of Clinical Competence in Speech-Language Pathology. They also must abide by the ASHA Code of Ethics, including Principle of Ethics II Rule B, which states: “Individuals shall engage in only those aspects of the profession that are within their competence, considering their level of education, training, and experience.”

The Position Statement, Technical Report, and Guidelines for Roles and Responsibilities of Speech-Language Pathologists With Respect to Reading and Writing in Children and Adolescents were developed by the Ad Hoc Committee on Reading and Writing and approved by the ASHA Legislative Council in 2000. Members of the Ad Hoc Committee on Reading and Writing, which produced those documents and this one, were Nickola Nelson (chair), Hugh Catts, Barbara Ehren, Froma Roth, Cheryl Scott, Maureen Staskowski, and Roseanne Clausen (ex officio). Diane Paul-Brown, Kathleen Whitmire, and Susan Karr provided consultation. Alex Johnson, 2001–2002 vice president for professional practices in speech-language pathology, and Nancy Creaghead, 1997–1999 vice president for professional practices in speech-language pathology, served as monitoring officers.

Assumptions

This document summarizes knowledge and skills needed by speech-language pathologists (SLPs) who work with reading and writing in children and adolescents. It is founded on several assumptions.

A first assumption is that practitioners have general background knowledge and skills that do not need to be reiterated here. These include knowledge regarding basic communication principles and parameters, skill in implementing the clinical practices of speech-language pathology, and attitudes of sensitivity to the needs of clients as members of larger familial, cultural, linguistic, and social systems. The lack of repetition of these basic expectations in this document should not be construed as minimizing their importance.

A second assumption is that boundaries between knowledge and skills are not always clear. That is, declarative knowledge *about* something is often intertwined with procedural knowledge (or skills) for being *able to do* something. Both are tempered by conditional knowledge that enables one to decide strategically how to apply declarative and procedural knowledge in real-life clinical situations.

Roles and Responsibilities

Knowledge and Skills for Reading and Writing Roles

A third assumption is that roles and responsibilities related to reading and writing in children and adolescents are essentially collaborative in nature. No one discipline “owns” them. SLPs work collaboratively with families, teachers, and other professionals to meet the literacy learning needs of infants, toddlers, children, and adolescents with and without disabilities.

A fourth assumption is that the knowledge and skills outlined here may be acquired in multiple learning environments, including continuing education, as well as preservice undergraduate and graduate education experiences. The specific knowledge and skills outlined in this document build on the basic knowledge and skills SLPs have about speech, language, and communication in general. This outline is intended to inform the activities of both university and continuing education program planners, as well as individual practitioners who are continuing to develop their skills. These knowledge and skills are necessary to meet the needs of children and adolescents with impaired communication systems in written as well as spoken language domains, and to understand the ramifications of not doing so.

As indicated in the Guidelines for Roles and Responsibilities of Speech-Language Pathologists With Respect to Reading and Writing in Children and Adolescents, appropriate roles and responsibilities for SLPs with regard to reading and writing in children and adolescents include, but are not limited to:

1. **Prevention.** This role addresses the goal to prevent written language problems by fostering language acquisition and emergent literacy.
2. **Identification.** This role addresses the goal of identifying children and adolescents with (or at risk for) reading and writing problems so that they may receive appropriate attention.
3. **Assessment.** This role addresses the goal of assessing reading and writing abilities and relating them to spoken communication, academic achievement, and other areas.
4. **Intervention.** This role addresses the goal to provide effective intervention for problems involving reading and writing and documenting the outcomes.
5. **Other roles.** Other roles include providing assistance to general education teachers, families, and students; advocating for effective literacy practices; and advancing the knowledge base.

The specialized knowledge base for these roles can be summarized into five categories. The categories are listed here and expanded below:

1. **The nature of literacy**, including spoken-written language relationships, and reading and writing as acts of communication and tools of learning.
2. **Normal development** of reading and writing in the context of the general education curriculum.
3. **Disorders of language and literacy** and their relationships to each other and to other communication disorders.
4. **Clinical tools and methods** for targeting reciprocal spoken and written language growth.
5. **Collaboration, leadership, and research principles** for working with others, serving as advocates, and advancing knowledge about evidence-based practices.

The skills that SLPs are expected to have to implement the roles are listed subsequently under the five roles: prevention, identification, assessment, intervention, and “other.”

Five Areas of Knowledge Relating Language and Literacy

1. Knowledge of the nature of literacy, spoken/written language relationships, and reading and writing as acts of communication and tools of learning.

- 1.1. Knowledge of the nature of proficient reading as influenced by knowledge of spoken language and involving word recognition, comprehension, and higher-order strategic thinking and executive functions.
- 1.2. Knowledge of the nature of writing as involving spelling and composing skills within a framework that includes both writing processes (what writers do during planning, organizing, drafting, revising, editing, and publishing) and written products (what writers produce at levels of discourse structure and cohesion, sentence-level complexity and style, word choice, spelling, and writing conventions).
- 1.3. Knowledge of phonology, phonetics, English orthography, word roots and history of origin, the alphabetic principle (i.e., letters representing speech sounds); and how readers and writers use knowledge of such systems to decode and spell words.
- 1.4. Knowledge of semantics, morphology, syntax, discourse structure, and sociolinguistic variation, and how readers and writers use knowledge of such systems to comprehend and compose literate discourse.
- 1.5. Knowledge of similarities and differences between spoken and written language forms (e.g., lexical choice differences, distribution of phrases, sentences, and cohesion structures), and how both spoken and written language can be literate.
- 1.6. Knowledge of the continuum of literacy levels from basic functional literacy to advanced academic/aesthetic literacy.

2. Knowledge of the normal development of reading and writing in the context of the general education curriculum.

- 2.1. Knowledge of emergent literacy contributions to literacy development, including spoken language interactions, environmental exposure to print, interactions with books and shared book reading, experiences with writing tools and pretend writing for varied purposes, and adult modeling of literacy.
- 2.2. Knowledge of reciprocal relationships among listening, speaking, reading, writing, and thinking.
- 2.3. Knowledge of age- and grade-based milestones for developing phonological awareness, learning the alphabetic principle, learning to decode and spell words, comprehending increasingly complex written language, and using increasingly mature writing processes to create higher-level written products.
- 2.4. Knowledge of how metalinguistic knowledge (i.e., consciously knowing about language) differs in earlier stages of reading and spelling when sound and morpheme awareness are prominent, to

later stages of reading and composing when executive strategies and explicit understanding of sentence and text structures help students read and write proficiently for academic and scholarly purposes.

- 2.5. Knowledge of how cultural-linguistic diversity affects spoken and written language learning from preschool through postsecondary years.
 - 2.6. Knowledge about curricular materials, subjectspecific curriculum content, and language/literacy expectations and standards from preschool through post-secondary education.
- 3. Knowledge of disorders of spoken language and literacy and their links to each other and to related communication disorders.**
- 3.1. Knowledge about the language bases of disorders of reading, spelling, and writing, as well as risk factors, both internal (e.g., genetic and neurobiological), and external (e.g., socioeconomic and experiential limitations) related to prevention and early identification of reading and writing problems.
 - 3.2. Knowledge about the characteristics and “life span” expectations for individuals with primary language impairments, from late talkers to preschoolers with language impairments, who often become older school-age children, adolescents, and adults with language impairments and academic problems, including that:
 - 3.2.1. Preschool children with language impairments tend to have difficulty with rhyming, letter knowledge, and other concepts related to emergent literacy.
 - 3.2.2. Elementary age children with early appearing language impairments tend to exhibit problems with phonology, semantics, morphology, syntax, cohesive discourse, and metalinguistic uses of language, as well as continuing problems in phonological processing that underlie word recognition and spelling.
 - 3.2.3. Other elementary age children may show later emerging language-based reading and writing problems without prior identification as speech-language impaired and in the absence of problems of phonological awareness and decoding.
 - 3.2.4. Adolescents and adults with language impairments tend to have difficulty with metalinguistic abilities, abstract language, higher-order thinking, and applying strategic thinking and selfregulation skills necessary for proficient reading and writing (metacognition). Some have continuing problems in phonological processing that underlie word recognition and spelling.
 - 3.3. Knowledge about the inherent variations and heterogeneity among spoken-written language disabilities, such as between individuals whose reading problems might be traced to a fairly isolated inability to master the alphabetic principle, compared with those whose problems extend beyond decoding to broader difficulties with higher-level language comprehension.
 - 3.4. Knowledge about how reading and writing development can be affected by conditions such as language-learning disabilities, autism spectrum disorders, cognitive disabilities, hearing impairments,

infectious or traumatic brain impairments, or severe speech impairments and augmentative and alternative communication (AAC) needs.

4. Knowledge of tools and methods for targeting reciprocal spoken and written language growth.

- 4.1. Knowledge about techniques for early identification of reading and writing difficulty, including formal and informal screening instruments and methods, as well as techniques for identifying underlying language problems associated with lack of reading and writing proficiency in older students.
- 4.2. Knowledge about techniques and tools for identifying medical and/or environmental factors in language impairments.
- 4.3. Knowledge about reading and writing assessment models and techniques, including standardized tests, as well as criterion-referenced, curriculum-based, and functional assessment methods for:
 - 4.3.1. Gathering reading and writing samples, as well as spoken ones.
 - 4.3.2. Describing individual profiles across language systems (phonology, morphology, syntax, semantics, pragmatics), levels (discourse, sentence, word, sound), and processes (decoding, comprehension, spelling, composing).
 - 4.3.3. Relating written language problems to spoken language systems, and to cognitive and metacognitive processes (e.g., retrieval, working memory, strategic thinking, executive function).
 - 4.3.4. Diagnosing impairments and suggesting approaches to intervention.
 - 4.3.5. Establishing a cumulative, longitudinal record of literacy strengths and needs, and intervention outcomes.
- 4.4. Knowledge of dynamic assessment techniques and how to reduce bias when assessing the reading and writing abilities of students, including those with cultural and linguistic differences, emotional or behavioral issues, cognitive limitations, severe physical impairments, or multiple disabilities.
- 4.5. Knowledge of what constitutes a comprehensive, balanced approach to literacy development that combines:
 - 4.5.1. Teaching phonological awareness and other aspects of emergent literacy and providing explicit instruction in the alphabetic principle.
 - 4.5.2. Helping students relate written and spoken language forms and uses.
 - 4.5.3. Explicit teaching of reading fluency and reading comprehension as well as decoding.
 - 4.5.4. Working on writing processes as well as products.
 - 4.5.5. Targeting both skills and strategies for proficient reading and writing.

Skills Related to Roles

- 4.5.6. Providing opportunities to read and write for purposes of authentic communication.
- 4.5.7. Teaching specific linguistic systems crucial for literacy, including derivational morphology, complex syntax, and narrative and expository text structure.
- 4.6. Knowledge of varied intervention approaches and how to match them to students' needs for learning to read and write and to relate them to intervention for problems of listening and speaking.
- 4.7. Knowledge of computer supports and other technological advances for students having difficulty learning to read and write.
- 5. **Knowledge of collaboration, leadership, and research principles for working with others, serving as advocates, and advancing the knowledge base.**
 - 5.1. Knowledge of the strategies and techniques of interdisciplinary collaboration and team skills and their use in addressing problems of reading and writing.
 - 5.2. Knowledge of leadership principles and how to work with others to effect positive changes at systemic levels.
 - 5.3. Knowledge about policies and politics; committees, panels, and debates; and how they influence the assessment and teaching of reading and writing in the states' and nation's schools.
 - 5.4. Knowledge of research principles, including how to conduct practice-based research to address language and literacy questions that arise as a function of reflective clinical practice.
- 1. **Prevention skills include the ability to use knowledge of multiple risk factors, including cooccurrence with spoken language difficulties to:**
 - 1.1. Predict which children might need more intensive experiences or instruction.
 - 1.2. Communicate risk factors for an individual child to others (e.g., the child's parents, preschool teachers, classroom teachers).
 - 1.3. Work with others to modify environmental or intrinsic conditions that place a child or adolescent at risk for learning to read and write at appropriate levels.
 - 1.4. Work with others to provide children and adolescents with and without disabilities with rich emergent literacy experiences to foster growth in all systems of language and to prevent difficulties in learning to read and write.
 - 1.5. Work with others to help children and adolescents acquire explicit, age-appropriate knowledge of language units (discourse, sentence, word, sound), systems (phonology, morphology, syntax, semantics, pragmatics), and processes (e.g., decoding, spelling, comprehension, composition, memory, retrieval, executive functioning) that are needed to prevent difficulty in literate language learning.
 - 1.6. Maintain longitudinal vigilance for students with language-learning risks to prevent difficulty with higher-level skills as literacy requirements and expectations advance.

2. Identification skills include the ability to:

- 2.1. Help teachers recognize the signs of successful learning and differentiate them from symptoms of literacy learning risks, including how to recognize spoken and written language problems involving:
 - 2.1.1. Phonological, orthographic, morphological, and word knowledge and processing, along with effects on word decoding, spelling, and rapid word retrieval.
 - 2.1.2. Syntactic, semantic, and pragmatic knowledge, and contributions to literal and inferential sentence and discourse comprehension and production.
- 2.2. Recognize reading and writing difficulties among children previously on the caseload for disorders of spoken language.
- 2.3. Recognize when children with disabilities need explicit intervention and increased opportunities to read and write for communication purposes.
- 2.4. Develop and communicate to teachers screening and referral procedures appropriate for different grade levels, including formal and informal screening instruments and teacher observation checklists.
- 2.5. Work with populations of individuals with sociolinguistic differences, as well as with diverse disabilities, to modify identification procedures (e.g., to use dynamic assessment techniques and criterion referenced tasks) to meet children and adolescents' unique needs and to identify skills or difficulties that may otherwise be hidden.
- 2.6. Establish a tracking system for identifying new or re-emerging literacy difficulties as children progress through the academic curriculum and language demands change.

3. Assessment skills include the ability to:

- 3.1. Select and implement assessment materials and methods that are appropriate for a given child, considering teachers' and family concerns as well as knowledge about varied disability types, cultural background, and the child's or adolescent's unique profile of strengths and needs.
- 3.2. Gather reading and writing samples using a variety of curriculum-based tasks and discourse genres, and apply knowledge of the reciprocal nature of spoken and written language to describe relationships among the student's abilities for phonological awareness, word-level decoding and spelling, sentence-level comprehension and formulation, and discourse-level comprehension and composition processes.
- 3.3. Use dynamic assessment techniques and other culturally appropriate and curriculum-relevant methods and materials to perform nonbiased assessments and to explore flexibility, speed, and limits of literacy skills.
- 3.4. Work with others to assure appropriate accommodations and/or interpretation of district and state-mandated literacy assessments.

4. Intervention skills including abilities to:

- 4.1. Apply current research and practice knowledge when making decisions about the intensity, longevity, and service delivery models that best fit particular children.
- 4.2. Use assessment data about a student's current developmental levels in spoken and written language, along with knowledge of curricular expectations, to establish intervention targets and plan intervention activities in collaboration with teachers and families that are designed to keep the student progressing in the general education curriculum.
- 4.3. Help a child or adolescent apply knowledge of all language systems—phonology, semantics, morphology, syntax, pragmatics—to decode and comprehend written text while reading, and to organize discourse, compose sentences, and spell words while writing.
- 4.4. Teach children and adolescents a strategic approach to reading and writing.
- 4.5. Decide when to isolate skills and strategies for concentrated practice and when to work with them in integrated contexts.
- 4.6. Plan individualized instruction for students with varied patterns of strengths, needs, and disabilities (e.g., language-learning disability, deafness and hearing impairment, mental retardation, traumatic brain impairment, autism spectrum disorder, emotional or behavioral impairment, attention deficit hyperactivity disorder, severe speech impairment requiring augmentative and alternative communication methods, or communication disability in combination with second language learning).
- 4.7. Work with teachers to include students with disabilities in classroom learning opportunities with peers, as well as in special presentations and performances involving literate language use.
- 4.8. Use innovative technologies to maximize children's and adolescents' opportunities and to enhance their skills for learning to read, write, listen, and speak effectively.
- 4.9. Document the outcomes of intervention.

5. Skills for implementing other roles involving collaboration, leadership, advocacy, and ongoing development of knowledge to:

- 5.1. Advocate for the needs of children and adolescents with literacy learning and communication disorders of all kinds.
- 5.2. Participate as members of interdisciplinary assessment teams and identify tools and strategies to be employed by each member of the team, in some cases sharing roles, as on transdisciplinary teams.
- 5.3. Collaborate with general and special education teachers in a variety of service delivery models to provide inclusive educational experiences that maximize the potential of all students to progress in the general education curriculum.
- 5.4. Manage caseload responsibilities to accommodate new or expanded roles with reading and writing.
- 5.5. Work in nonschool settings to provide intervention that is relevant to school-based academic and social interaction needs.

- 5.6. Conduct or participate in research to add to the knowledge base about spoken and written language and communication.
- 5.7. Participate in and provide consultation and continuing education experiences to help colleagues learn about relationships among spoken and written language and the benefits of integrating them in instruction for all students.
- 5.8. Contribute to policy development that makes it possible for students with disabilities to participate in literacy activities, to achieve in the general education curriculum, to graduate, and to compete successfully in gaining employment as adults.
- 5.9. Provide information about normal development to committees and task forces that plan and evaluate curricula, establish comprehensive assessments, and set related policies.
- 5.10. Develop and evaluate new methods, materials, and other technologies to improve assessment and intervention practices.

Bibliography of Selected Resources

General Resources

- American Speech-Language-Hearing Association. (1997). *Preferred practice patterns for the profession of speech-language pathology*. Rockville, MD: Author.
- American Speech-Language-Hearing Association. (2001). *Scope of practice for speech-language pathology*. Rockville, MD: Author.
- Adams, M. (1990). *Beginning to read*. Cambridge: MIT Press.
- Burns, S. M., Griffin, P., & Snow, C. E. (1999). *Starting out right: A guide to promoting children's reading success*. Washington, DC: National Academy Press.
- Catts, H. W., & Kamhi, A. G. (1999). *Language and reading disabilities*. Boston: Allyn & Bacon.
- Clark, D., & Uhry, J. K. (1995). *Dyslexia: Theory and practice of remedial instruction*. Baltimore: York Press.
- Hall, S., & Moats, L. (1999). *Straight talk about reading*. Chicago: Contemporary Publishing.
- Nelson, N. W. (1998). *Childhood language disorders in context: Infancy through adolescence* (2nd ed.). Boston: Allyn & Bacon.
- Paul, R. (2001). *Language disorders from infancy through adolescence: Assessment and intervention* (2nd ed.). St. Louis, MO: Mosby.
- Roth, F. P., & Ehren, B. J. (Eds.). (2001). Implementing literacy-related intervention roles for speech-language pathologists. *Seminars in Speech and Language*, 22.
- Simmons, D., & Kameenui, E. (1998). *What reading research tells us about children with diverse learning needs*. Mahwah, NJ: Erlbaum.
- Snow, C. E., Burns, M. S., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press.
- Wallach, G. P., & Butler, K. G. (Eds.). (1994). *Language learning disabilities in school-age children and adolescents*. Boston: Allyn & Bacon.

Reciprocal Relationships

- Barnhart, J. E. (1990). Differences in story retelling behaviors and their relation to reading comprehension in second graders. In J. Zutell & S. McCormick (Eds.), *Literacy theory and research: Analyses from multiple paradigms* (pp. 257–266). Chicago: National Reading Conference.
- Berninger, V. W. (2000). Development of language by hand and its connections with language by ear, mouth, and eye. *Topics in Language Disorders*, 20(4), 65–84.
- Catts, H. W. (1993). The relationship between speech-language impairments and reading disabilities. *Journal of Speech and Hearing Research*, 36, 948–958.

- Clarke, L. K. (1988). Invented versus traditional spelling in first graders' writings: Effects on learning to read and spell. *Research in the Teaching of English*, 22, 281–309.
- Ehri, L. C. (2000). Learning to read and learning to spell: Two sides of a coin. *Topics in Language Disorders*, 20(3), 19–36.
- Greenhalgh, K. S., & Strong, C. J. (2001). Literate language features in spoken narratives of children with typical language and children with language impairments. *Language, Speech, & Hearing Services in Schools*, 32, 114–125.
- Roth, F. P. (2000). Narrative writing: Development and teaching with children with writing difficulties. *Topics in Language Disorders*, 20(4), 15–28.
- Silliman, E. R., Jimerson, T. L., & Wilkinson, L. C. (2000). A dynamic systems approach to writing assessment in students with language learning problems. *Topics in Language Disorders*, 20(4), 45–64.
- Sulzby, E. (1996). Roles of oral and written language as children approach conventional literacy. In C. Pontecorvo, M. Orsolini, B. Burge, & L. B. Resnick (Eds.), *Children's early text construction* (pp. 25–46). Mahway, NJ: Erlbaum.
- Torgesen, J. K. (1999). Assessment and instruction for phonemic awareness and word recognition skill. In H. W. Catts & A. G. Kamhi (Eds.), *Language and reading disabilities* (pp. 128–153). Boston, MA: Allyn & Bacon.
- Watson, L. R., Crais, E., & Layton, T. L. (2000). *Handbook of early language development in children: Assessment and treatment*. San Diego, CA: Delmar.

Identification

- Catts, H., Fey, M., Zhang, X., & Tomblin, J. B. (2001). Estimating the risk of future reading difficulties in kindergarten children: A research-based model and its clinical implementation. *Language, Speech, Hearing Services in Schools*, 32, 38–50.
- Scarborough, H. S. (1998). Early identification of children at risk for reading disabilities: Phonological awareness and some other promising predictors. In B. K. Shapiro, P. J. Accardo, & A. J. Capute (Eds.), *Specific reading disability: A view of the spectrum* (pp. 75–119). Timonium, MD: York Press.

Emergent Literacy

- Boudreau, D. M., & Hedberg, N. L. (1999). A comparison of early literacy skills in children with specific language impairment and their typically developing peers. *American Journal of Speech-Language Pathology*, 8, 249–260.
- Dickinson, D., & Tabors, P. O. (Eds.). (2001). *Beginning literacy*. Baltimore: Brookes.
- Hiebert, E. H. (1993). Young children's literacy experiences in home and school. In S. R. Yussen & M. C. Smith (Eds.), *Reading across the lifespan* (pp. 33–55). New York: Springer-Verlag.
- Leseman, P. M., & Jong, P. F. (1998). Home literacy: Opportunity, instruction, cooperation and social-emotional quality predicting early reading achievement. *Reading Research Quarterly*, 33, 294–318.
- McCabe, A. (1992). *Language games to play with your child*. New York: Plenum Press.
- McGee, L. M., & Richgels, D. J. (2000). *Literacy beginnings: Supporting young readers and writers* (3rd ed.). Needham, MA: Allyn & Bacon.
- Newman, S. B., & Dickinson, D. K. (2001). *Handbook of early literacy research*. New York: Guilford Press.
- Purcell-Gates, V. (1996). Stories, coupons, and the TV Guide: Relationships between home literacy experiences and emergent literacy knowledge. *Reading Research Quarterly*, 31, 406–428.
- Roth, F. P., & Baden, B. (2001). Investing in emergent literacy intervention: A key role for speech-language pathologists. *Seminars in Speech and Language*, 22, 163–173.
- Senechal, M., LeFeure, J., Thomas, E. M., & Daley, K. E. (1998). Differential effects of home literacy experiences on the development of oral and written language. *Reading Research Quarterly*, 33, 96–116.

- Teale, W. H., & Sulzby, E. (1986). Emergent literacy as a perspective for examining how young children become readers and writers. In W. H. Teale & E. Sulzby (Eds.), *Emergent literacy: Writing and reading* (pp. 7–25). Stanford, CT: Ablex.
- Troia, G. A., Roth, F. P., & Graham, S. (1998). An educator's guide to phonological awareness: Assessment measures and intervention activities for children. *Focus on Exceptional Children, 31*, 1–12.
- van Kleeck, A. (1990). Emergent literacy: Learning about print before learning to read. *Topics in Language Disorders, 10*, 25–45.
- Whitehurst, G. L., & Lonigan, C. J. (1998). Child development and early literacy. *Child Development, 69*, 848–872.
- Yopp, H. K. (1992). Developing phonemic awareness in young children. *The Reading Teacher, 45*, 696–703.

Word Recognition

- Adams, M. J. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: MIT Press.
- Apel, K., & Swank, L. K. (1999). Second chances: Improving decoding skills in the older student. *Language, Speech, and Hearing Services in Schools, 30*, 231–242.
- Ball, E. W., & Blachman, B. A. (1988). Phoneme segmentation training: Effect on reading readiness. *Annals of Dyslexia, 38*, 208–224.
- Chard, D. J., Simmons, D. C., & Kameenui, E. J. (1998). Word recognition: Research bases. In D. C. Simmons & E. J. Kameenui (Eds.), *What reading research tells us about children with diverse learning needs: Bases and basics* (pp. 239–278). Mahwah, NJ: Erlbaum.
- Cornoldi, C., & Oakhill, J. (Eds.). (1996). *Reading comprehension difficulties: Processes and intervention*. Mahwah, NJ: Erlbaum.
- Dickson, S. V., Simmons, D. C., & Kameenui, E. J. (1998). Text organization: Research bases. In D. C. Simmons & E. J. Kameenui (Eds.), *What reading research tells us about children with diverse learning needs: Bases and basics* (pp. 239–278). Mahwah, NJ: Erlbaum.
- Kamil, M. K., Mosenthal, P. B., Pearson, P. D., & Barr, R. (2000). *Handbook for reading research* (Vol. III). Mahwah, NJ: Erlbaum.
- Lovett, M. W., Lacerenze, L., & Borden, S. L. (2000). Putting struggling readers on the PHAST track: A program to integrate phonological and strategy-based remedial reading instruction and maximize outcomes. *Journal of Learning Disabilities, 33*, 458–476.
- Ruddell, R. B., Ruddell, M. R., & Singer, H. (Eds.). (1994). *Theoretical models and processes of reading* (4th ed.). Newark, DE: International Reading Association.
- Torgesen, J. K. (1999). Assessment and instruction for phonemic awareness and word recognition skills. In H. W. Catts & A. H. Kamhi (Eds.), *Language and reading disabilities* (pp. 128–153). Boston: Allyn & Bacon.

Reading Comprehension

- Borkowski, J. G. (1992). Metacognitive theory: A framework for teaching literacy, writing, and math skills. *Journal of Learning Disabilities, 25*(4), 253–257.
- Cornoldi, C., & Oakhill, J. (Eds.). (1996). *Reading comprehension difficulties: Processes and intervention*. Mahwah, NJ: Erlbaum.
- Deshler, D. D., & Lenz, B. K. (1989). The strategic instructional approach. *International Journal of Disability, Development, and Education, 36*, 203–224.
- Farr, R., & Tone, B. (1994). *Portfolio and performance assessment: Helping students evaluate their progress as readers and writers*. Fort Worth, TX: Harcourt, Brace.
- Gersten, R., Fuchs, L. S., Williams, J. P., & Baker, S. (1999). *Reading comprehension instruction for students with learning disabilities: A research synthesis* (report). Washington, DC: U. S. Department of Education.
- Goldsworthy, C. L. (1996). *Developmental reading disabilities: A language-based treatment approach*. San Diego, CA: Singular Publishing.

- Harvey, S. (1998). *Nonfiction matters: Reading, writing, and research in grades 3–8*. York, ME: Stenhouse Publishers.
- Kameenui, E. J. (Ed.). (1997). *Effective teaching strategies that accommodate diverse learners*. Upper Saddle River, NJ: Prentice Hall.
- Mastropieri, M. A., & Scruggs, T. E. (1997). Best practices in promoting reading comprehension in students with learning disabilities: 1976 to 1996. *Remedial and Special Education, 18*(4), 197–213.
- Paris, S. G., Lipson, M. Y., & Wixson, K. K. (1994). Becoming a strategic reader. In R. B. Ruddell, M. R. Ruddell, & H. Singer (Eds.), *Theoretical models and processes of reading* (4th ed., pp. 788–810). Newark, DE: International Reading Association.
- Pressley, M. (1998). *Reading instruction that works: The case for balanced teaching*. New York: Guilford Press.
- Pressley, M., & Wharton-MacDonald, R. (1997). Skilled comprehension and its development through instruction. *School Psychology Review, 26*, 448–466.
- Simmons, D. C., & Kameenui, E. J. (Eds.). (1998). *What reading research tells us about children with diverse learning needs: Bases and basics*. Mahwah, NJ: Erlbaum.
- Tovani, C. (2000). *I read it, but I don't get it: Comprehension strategies for adolescent readers*. Portland, ME: Stenhouse.
- Westby, C. E. (1999a). Assessing and facilitating text comprehension problems. In H. W. Catts & A. G. Kamhi (Eds.), *Language and reading disabilities* (pp. 154–223). Boston: Allyn & Bacon.

Spelling

- Bear, D., Invernizzi, M., Templeton, S., & Johnston, P. (2000). *Words their way* (2nd ed.). Columbus, OH: Merrill.
- Berninger, V., Vaughan, K., Abbott, R., Brooks, A., Begay, K., Curtin, G., Byrd, K., & Graham, S. (2000). Language-based spelling instruction: Teaching children to make multiple connections between spoken and written words. *Learning Disability Quarterly, 23*, 117–135.
- Ehri, L. (2000). Learning to read and learning to spell: Two sides of a coin. *Topics in Language Disorders, 20*(3), 19–36.
- Graham, S. Handwriting and spelling instruction for students with learning disabilities: A review. *Learning Disabilities Quarterly, 22*, 78–98.
- Hall, S., & Moats, L. (1999). *Straight talk about reading*. Chicago: Contemporary Publishing.
- Masterson, J., & Apel, K. (2000). Spelling assessment: Charting a path to optimal intervention. *Topics in Language Disorders, 20*(3), 50–66.
- Moats, L. (1995). *Spelling: Development, difficulty, and instruction*. Baltimore: York Press.
- Moats, L. (2000). *Speech to print*. Baltimore: Brookes.
- Scott, C. (2000). Principles and methods of spelling instruction: Applications for poor spellers. *Topics in Language Disorders, 20*(3), 66–82.
- Scott, C., & Brown, S. (2001). Spelling and the speech-language pathologist: There's more than meets the eye. *Seminars in Speech and Language, 22*, 197–298.
- Trieman, R. (1993). *Beginning to spell: A study of first grade children*. New York: Oxford University Press.

Written Composition

- Bereiter, C., & Scardamalia, M. (1987). *The psychology of written composition*. Hillsdale, NJ: Erlbaum.
- Englert, C. S., Raphael, T. E., Anderson, L. M., Anthony, H. M., Stevens, D., & Fear, K. (1991). Making writing strategies and self-talk visible: Cognitive strategy instruction in writing in regular and special education classrooms. *American Educational Research Journal, 28*, 337–373.
- Graves, D. H. (1983). *Writing: Teachers and children at work*. Portsmouth, NH: Heinemann.

- Harris, K. R., & Graham, S. (1996). *Making the writing process work: Strategies for composition and self-regulation*. Cambridge, MA: Brookline Books.
- Hayes, J., & Flower, L. (1980). Identifying the organization of the writing process. In L. W. Gregg & E. R. Steinberg (Eds.), *Cognitive processes in writing* (pp. 3–10). Hillsdale, NJ: Erlbaum.
- Juel, C. (1988). Learning to read and write: A longitudinal study of 54 children from first through fourth grades. *Journal of Educational Psychology*, *80*, 437–447.
- Roth, F. P. (2000). Narrative writing: Development and teaching with children with writing difficulties. *Topics in Language Disorders*, *20*(4), 15–28.
- Scardamalia, M., & Bereiter, C. (1986). Research on written composition. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (pp. 778–803). NY: Macmillan.
- Scott, C. M. (1999). Learning to write. In H. W. Catts & A. G. Kamhi (Eds.), *Language and reading disabilities* (pp. 224–258). Boston: Allyn & Bacon.
- Silliman, E. R., Jimerson, T. L., & Wilkinson, L. C. (2000). A dynamic systems approach to writing assessment in students with language learning problems. *Topics in Language Disorders*, *20*(4), 45–64.
- Troia, G. A., Graham, S., & Harris, K. R. (1999). Teaching students with learning disabilities to mindfully plan when writing. *Exceptional Children*, *65*, 235–252.
- Wong, B. Y. L. (2000). Writing strategies instruction for expository essays for adolescents with and without learning disabilities. *Topics in Learning Disorders*, *20*(4), 29–44.

Special Populations

- Andrews, J. K., & Mason, J. A. (1986). How do deaf children learn about prereading? *American Annals of the Deaf*, *131*, 210–217.
- Beukelman, D. R., Mirenda, P., & Sturm, J. (1998). Literacy development of AAC users. In D. R. Beukelman & P. Mirenda (Eds.), *Augmentative and alternative communication* (pp. 391–426). Baltimore: Brookes.
- Blischak, D. M. (1995). Thomas the writer: Case study of a child with severe physical, speech, and visual impairments. *Language, Speech, and Hearing Services in Schools*, *26*, 11–20.
- Bos, C. S. (1988). Process-oriented writing: Instructional implications for mildly handicapped students. *Exceptional Children*, *54*, 521–527.
- Cesaroni, L., & Garber, M. (1991). Exploring the experience of autism through firsthand accounts. *Journal of Autism and Developmental Disorders*, *21*, 303–313.
- Donahue, M. L., Szymanski, C. M., & Flores, C. W. (1999). When “Emily Dickinson” met “Steven Spielberg”: Assessing social information processing in literacy contexts. *Language, Speech, and Hearing Services in Schools*, *30*, 274–284.
- Ewolt, C. (1990). The early literacy development of deaf children. In D. F. Moores & K. P. Meadows-Orlans (Eds.), *Educational and developmental aspects of deafness* (pp. 85–114). Washington, DC: Gallaudet University Press.
- Gutierrez-Clellan, V. F. (1999). Mediating literacy skills in Spanish-speaking children with special needs. *Language, Speech, and Hearing Services in Schools*, *30*, 285–292.
- Gutierrez-Clellan, V. F. (2000). Dynamic assessment: An approach to assessing children's language-learning potential. *Seminars in Speech and Language*, *21*, 215–222.
- Kaderavek, J. N., & Sulzby, E. (2000). Issues in emergent literacy for children with language impairments. In L. R. Watson, E. Crais, & T. L. Layton (Eds.), *Handbook of early language development in children: Assessment and treatment* (pp. 199–244). San Diego, CA: Delmar.
- Koppenhaver, D. A., Coleman, P. P., Kalman, S. L., & Yoder, D. E. (1991). The implications of emergent literacy research for children with developmental disabilities. *American Journal of Speech-Language Pathology*, *1*, 38–44.
- Koppenhaver, D. A., & Yoder, D. E. (1993). Classroom literacy instruction for children with severe speech and physical impairments (SSPI): What is and what might be. *Topics in Language Disorders*, *13*(2), 1–15.

- Leonard, L. B. (1998). *Children with specific language impairment*. Cambridge, MA: MIT Press.
- Michaels, S. (1981). Sharing time: Children's narrative styles and differential access to literacy. *Language in Society, 10*, 423–442.
- Musselman, C. (2000). How do children who can't hear learn to read an alphabetic script? *Journal of Deaf Studies and Deaf Education, 2*, 9–31.
- Pebly, M., & Koppenhaver, D. A. (2001). Emergent and early literacy interventions for students with severe communication impairments. *Seminars in Speech and Language, 22*, 221–232.
- Rottenberg, C. J., & Searfoss, L. W. (1992). Becoming literate in a preschool class: Literacy development of hearing impaired children. *Journal of Reading Behavior, 24*, 463–479.
- Smitherman, G. (1994). "The blacker the berry, the sweeter the juice": African American student writers. In A. H. Dyson & C. Genishi (Eds.), *The need for story: Cultural diversity in classroom and community* (pp. 80–101). Urbana, IL: National Council of Teachers of English.
- Sterne, A., & Goswami, U. (2000). Phonological awareness of syllables, rhymes, and phonemes in deaf children. *Journal of Childhood Psychology and Psychiatry, 41*, 609–625.
- Stinson, M. S., & Whitmire, K. A. (2000). Adolescents who are deaf or hard of hearing: A communication perspective on educational placement. *Topics in Language Disorders, 20*(2), 58–72.
- Sturm, J. M., & Koppenhaver, D. A. (2000). Supporting writing development in adolescents with developmental disabilities. *Topics in Language Disorders, 20*(2), 73–96.
- Tabors, P. O., & Snow, C. E. (2001). Young bilingual children and early literacy development. In S. B. Neuman & D. K. Dickinson (Eds.), *Handbook of early literacy research* (pp. 157–178). New York: Guilford.
- Twachtman-Cullen, D. (2000). More able children with autism spectrum disorders: Sociocommunicative challenges and guidelines for enhancing abilities. In A. M. Wetherby & B. M. Prizant (Eds.), *Autism spectrum disorders* (pp. 225–249). Baltimore: Brookes.
- Watkins, R. V., & Rice, M. L. (Eds.). (1994). *Specific language impairments in children*. Baltimore: Brookes.
- Wallach, G. P., & Butler, K. G. (Eds.). (1994). *Language learning disabilities in school-aged children and adolescents*. Boston: Allyn & Bacon.
- Westby, C. E. (1994). The effects of culture on genre, structure, and style of oral and written texts. In G. P. Wallach & K. G. Butler (Eds.), *Language learning disabilities in school-aged children and adolescents* (pp. 180–218). Boston: Allyn & Bacon.
- Wetherby, A. M., & Prizant, B. M. (2000). *Autism spectrum disorders*. Baltimore: Brookes.
- Wong, B. Y. L., Butler, D. L., Ficzere, S. A., & Kuperis, S. (1996). Teaching low achievers and students with learning disabilities to plan, write, and revise opinion essays. *Journal of Learning Disabilities, 29*, 197–212.
- Ylvisaker, M., & DeBonis, D. (2000). Executive function impairment in adolescence: TBI and ADHD. *Topics in Language Disorders, 20*(2), 29–57.
- Yoshinaga-Itano, C., & Downey, D. M. (1996). Analyzing deaf or hard-of-hearing student's written metacognitive strategies and story-grammar propositions (monograph). *Volta Review, 98*, 63–64.
- Yoshinaga-Itano, C., Snyder, L. S., & Mayberry, R. (1996). How deaf and normally hearing students convey meaning within and between written sentences (monograph). *Volta Review, 98*, 9–38.

Using Technology to Support Literate Language Learning

- Bahr, C. M., Nelson, N. W., & Van Meter, A. M. (1996). The effects of text-based and graphics-based software tools on planning and organizing of stories. *Journal of Learning Disabilities, 29*, 355-370. Austin, TX: Pro-Ed. (This also appears in Technology for students with learning disabilities: Educational applications, with a print version and additional annotative text in a digital version.)
- Bahr, C. M., Nelson, N. W., Van Meter, A. M., & Yanna, J. V. (1996). Children's use of desktop publishing features: Process and product. *Journal of Computing in Childhood Education, 7*(3/4), 149-177.
- Bangert-Drowns, R. L. (1993). The word processor as an instructional tool: Meta-analysis of word processing in writing instruction. *Review of Educational Research, 63*, 69-93.
- Daiute, C. (1992). Multimedia composing: Extending the resources of kindergarten to writers across the grades. *Language Arts, 69*, 250-260.
- Erickson, B. J. (1992). A synthesis of studies on computersupported composition, revision, and quality. *Journal of Research on Computing in Education, 25*, 172-186.
- Graham, S., & MacArthur, C. (1988). Improving learning disabled students' skills at revising essays produced on a word processor: Self-instructional strategy training. *Journal of Special Education, 22*, 132-152.
- Hunt-Berg, M., Rankin, J., & Beukelman, D. (1994). Ponder the possibilities: Computer-supported writing for struggling writers. *Learning Disabilities Research and Practice, 9*(3), 169-178.
- MacArthur, C. A. (2000). New tools for writing: Assistive technology for students with writing difficulties. *Topics in Language Disorders, 20*(4), 85-100.
- MacArthur, C. A., Schwartz, S. S., & Graham, S. (1991). A model for writing instruction: Integrating word processing and strategy instruction into a process approach to writing. *Learning Disabilities Research and Practice, 6*, 230-236.
- Nelson, N. W., Bahr, C. M., & Van Meter, A. M. (In press). *The writing lab approach to language intervention*. Baltimore: Brookes.
- Storeygard, J., Simmons, R., Stumpf, M., & Pavloglou, E. (1993). Making computers work for students with special needs. *Teaching Exceptional Children, 26*(1), 22-24.
- Sturm, J. M., Rankin, J. L., Beukelman, D. R., & Schutz-Muehling, L. (1997). How to select appropriate software for computer-assisted writing. *Intervention in School and Clinic, 32*, 148-161.
- Wood, L. A., Rankin, J. L., & Beukelman, D. R. (1997). Word prompt programs: Current uses and future possibilities. *American Journal of Speech-Language Pathology, 6*, 57-65.

Leadership

- American Speech-Language-Hearing Association. (1999). *Guidelines for the roles and responsibilities of the school-based speech-language pathologist*. Rockville, MD: Author.
- Bashir, A., Conte, B. M., & Heerde, S. M. (1998). Language and school success: Collaborative challenges and choices. In D. D. Merritt & B. Culatta (Eds.), *Language intervention in the classroom* (pp. 1-36). San Diego, CA: Singular.
- Coben, S. S., Thomas, C. C., Sattler, R. O., & Morsink, C. V. (1997). Meeting the challenge of consultation and collaboration: Developing interactive teams. *Journal of Learning Disabilities, 30*, 427-432.
- Cochran-Smith, M., & Lytle, S. L. (1993). *Inside-outside: Teacher research and knowledge*. New York: Teachers College Press.
- Fishbaugh, M. S. (1997). *Models of collaboration*. Boston: Allyn & Bacon.
- Fullan, M. (1993). *Change forces: Probing the depths of educational reform*. New York: Falmer Press.
- Idol, L., Nevin, A., & Paolucci-Whitcomb, P. (1994). *Collaborative consultation* (2nd ed.). Austin, TX: Pro-Ed.

- Merritt, D. D., & Culatta, B. (1998). *Language intervention in the classroom*. San Diego, CA: Singular.
- Moore-Brown, B. J., & Montgomery, J. K. (2001). *Making a difference for American's children: Speech-language pathologists in public schools*. Eau Claire, WI: Thinking Publications.
- Prelock, P. A., Miller, B. L., & Reed, N. L. (1995). Collaborative partnerships in a language in the classroom program. *Language, Speech, and Hearing Services in Schools, 26*, 286–292.
- Risko, V. J., & Bromley, K. (2001). *Collaboration for diverse learners*. Newark, DE: International Reading Association.
- Villa, R. A., Thousand, J. S., Nevin, A. I., & Malgeri, C. (1996). Instilling collaboration for inclusive schooling as a way of doing business in public schools. *Remedial and Special Education, 17*, 169–181.