

# Augmentative and Alternative Communication and Literacy Teams: Facing the Challenges, Forging Ahead

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## ABSTRACT

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The development of literacy skills in individuals who use augmentative and alternative communication (AAC) requires the collective efforts of collaborative literacy teams who have expertise in language, literacy, and AAC. Literacy teams responsible for teaching reading and writing skills to students with complex communication needs face many challenges including students who often cannot participate in conventional literacy activities (e.g., reading aloud), a lack of materials and resources, and poor professional preparation in the area of AAC and literacy. In the ongoing effort to improve the quality and effectiveness of literacy services provided to students who use AAC, it is important to evaluate the professional expertise of personnel involved in literacy assessment and intervention. This article uses the current research base to provide a discussion of several issues and challenges faced by school-based literacy teams who provide reading and writing services to students with complex communication needs. Future goals and directions for literacy teams striving to provide effective reading and writing services are also explored in a discussion aimed at the advancement of school-based literacy services for students who use AAC.

**KEYWORDS:** Augmentative and alternative communication, literacy, personnel preparation, schools, speech-language pathologists, professional development

**Learning Outcomes:** As a result of this activity, the reader will be able to (1) describe challenges and issues facing literacy teams who provide instruction to individuals who require augmentative and alternative

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communication (AAC), (2) list potential solutions to improve literacy services for students who use AAC, and (3) describe future research directions that may improve literacy services for students with complex communication needs.

Literacy teams entrusted with the responsibility of teaching reading and writing skills to students with complex communication needs face many challenges. They face a literature base that offers little empirically based guidance for the provision of effective literacy instruction and the repeated message that students who require augmentative and alternative communication (AAC) (e.g., communication books, voice-output communication devices) are less likely to successfully acquire literacy skills.<sup>1-6</sup> The students with severe speech impairments have unique and complex learning needs often resulting from their inability to participate in conventional literacy activities such as reading aloud, providing spoken responses to literacy activities (e.g., producing sounds that correspond with letters, blending individual sounds into spoken words), or answering reading comprehension questions. The lack of spoken responses often precludes the use of traditional assessment methods and requires educators to adapt teaching techniques to meet these complex needs.<sup>3,4,7,8</sup> Given these obstacles, students who use AAC typically do not have the same rich and consistent literacy learning experiences as their speaking peers. In fact, the research suggests that the literacy learning experiences of students who use AAC are inconsistent and often of a lesser quality and quantity.<sup>7,9-11</sup>

The presence of these challenges, however, does not prevent dedicated literacy teams from recognizing three indisputable facts. (1) Now more than ever, reading and writing skills are crucial for all children to achieve success as text-based technologies become increasingly interwoven into academic, social, and vocational contexts.<sup>8</sup> (2) Despite the overwhelmingly consistent data reporting the risks for students with complex communication needs, there is a relatively small but encouraging body of literature that repeatedly describes the successful acquisition of reading and writing skills by individuals who require AAC.<sup>1,3,4,9</sup> (3) Regardless of the many roadblocks thrown up along the path to literacy development, it is

the responsibility of literacy teams consisting of regular educators, special educators, and related service providers such as speech-language pathologists (SLPs) and reading specialists to guide students with complex communication needs along the road to successful literacy skills acquisition.

In the ongoing effort to improve literacy services for students with complex communication needs, it is important to examine current practices as well as the challenges that may be impacting this critical developmental process. The professional expertise of school-based literacy team members, in particular, merits careful examination as it is essential for successful literacy instruction. This article provides a discussion of contemporary professional expertise issues including the preparedness, attitudes, and resources of school-based personnel who provide literacy services to students who use AAC. Specifically, the roles of SLPs as members of literacy teams are examined using data from a national survey of school-based SLPs who were asked about their attitudes and perspectives regarding literacy service provision to students who use AAC.<sup>11</sup> Using the results from the current survey project along with data from several other literacy and AAC research studies, this article seeks to (1) provide a discussion of current issues and challenges faced by school-based literacy teams who provide reading and writing services to students with complex communication needs and (2) discuss future goals and directions for literacy teams who strive to provide effective reading and writing services to students with complex communication needs.

## CHALLENGES FOR LITERACY TEAMS

Professional expertise forms the bedrock of the literacy instruction process. General educators, special educators, and related service providers (e.g., SLPs) must feel comfortable and confident in their own skills and knowledge to effectively guide their students on the path to

literacy learning. It is concerning, therefore, that many professionals responsible for teaching students who use AAC to read and write are often at loss for (a) understanding the best literacy instructional practices, (b) gaining access to appropriate curricular materials, and (c) making the adaptations necessary to teach literacy skills to struggling readers and writers who require AAC. With research repeatedly describing the challenges of providing literacy instruction to students with complex communication needs, it is important to more closely examine the current preparedness of literacy team members to provide literacy instruction to this population in the school setting.<sup>7,10,11</sup>

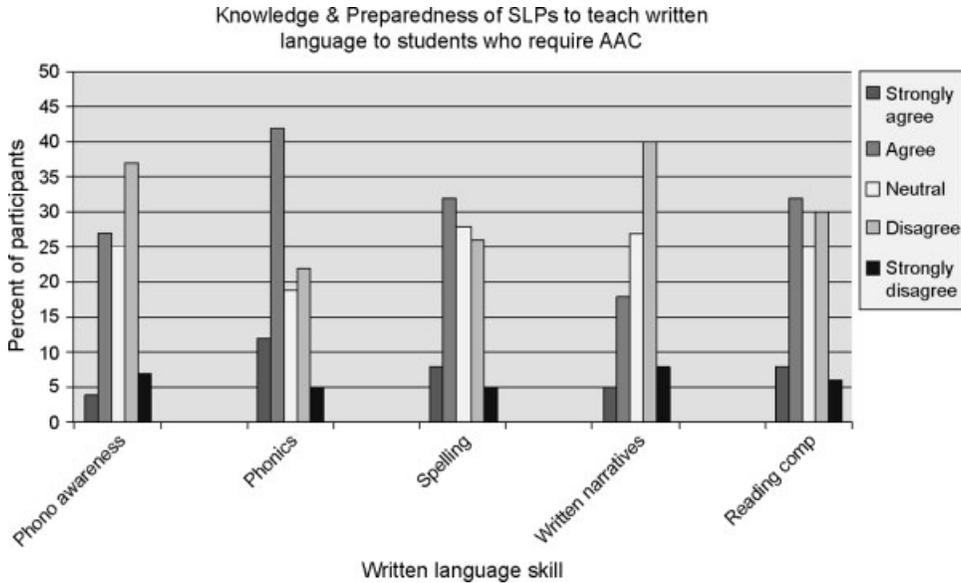
### Knowledge and Skills of Team Members

One literacy service provider, the SLP, brings a combination of expertise in spoken language, written language, and AAC practice to the literacy team. With a professional scope of practice that covers all of these areas, it is critical that SLPs feel competent and comfortable in teaching literacy skills to students who use AAC. To help determine the level of expertise in this area, school-based SLPs from across the United States were asked to rate their knowledge and preparedness for providing reading and writing services to students who require AAC.<sup>11</sup> A total of 359 SLPs working in rural (42%), suburban (37%), and urban (22%) schools in 48 states (only Maine and Hawaii were not represented) completed the survey. All participants had at least one student who used AAC on their caseload. Respondents ranged in years of experience from 0 to 30+ years and worked in a variety of school settings with 90% in elementary schools, 42% in middle schools, and 34% in high schools (many participants worked in multiple school settings). The Web-based survey used Likert-style and open-ended questions to investigate the following research questions: (a) How knowledgeable/ prepared do school-based SLPs feel about written language assessment and intervention practices with students who require AAC? (b) What are the attitudes of school-based SLPs toward working with struggling readers and writers who require AAC? (c) What are the attitudes

of school-based SLPs about the resources available to them for providing written language services to struggling readers and writers who require AAC? (d) What role does SLP knowledge/preparedness, attitudes, and resources play in the amount of written language services provided to students who use AAC?

Results of this national survey suggested that the majority of participants believed that they did not have the overall expertise to help struggling readers and writers who require AAC (79% disagreed or were neutral). The respondents reported overall low levels of preparedness to provide services in critical written language skill areas. Specifically, the least amount of preparedness was reported for written narratives (77% disagreed or were neutral) and phonologic awareness (69% disagreed or were neutral). Participants felt more prepared to provide instruction in the areas of phonics (54%), spelling (40%), and reading comprehension (39%), but despite these slightly higher percentages, a substantial number of professionals reported overall poor perceptions of their own expertise and abilities to provide literacy assessment and instruction to students who require AAC. Also concerning, only 11% of respondents indicated that they had adequate access to literacy assessment materials, and 8% reported access to the instructional materials and resources necessary to help struggling readers and writers who use AAC (Fig. 1).

These data are consistent with findings from other school-based survey studies where SLPs reported low levels of AAC expertise for providing services that address a variety of communication needs including written language services.<sup>12,13</sup> Further, SLP participants have often suggested that this lack of competence and training in the area of AAC is a barrier to effective service provision for students with complex communication needs and one that may contribute to overall negative outcomes for students who require AAC.<sup>7,14</sup> The data describing the lack of self-perceived expertise and competence for the provision of literacy services to students who require AAC clearly highlights a critical professional development challenge that must be overcome. Further, these data support the current literature base, which consistently suggests that a



**Figure 1** Knowledge and preparedness of SLPs to teach written language to students who require AAC.

common barrier to literacy development is a lack of professional knowledge and skills needed to adapt literacy curricula and meet the unique learning needs of students who use AAC.<sup>3,4,7,13,15</sup>

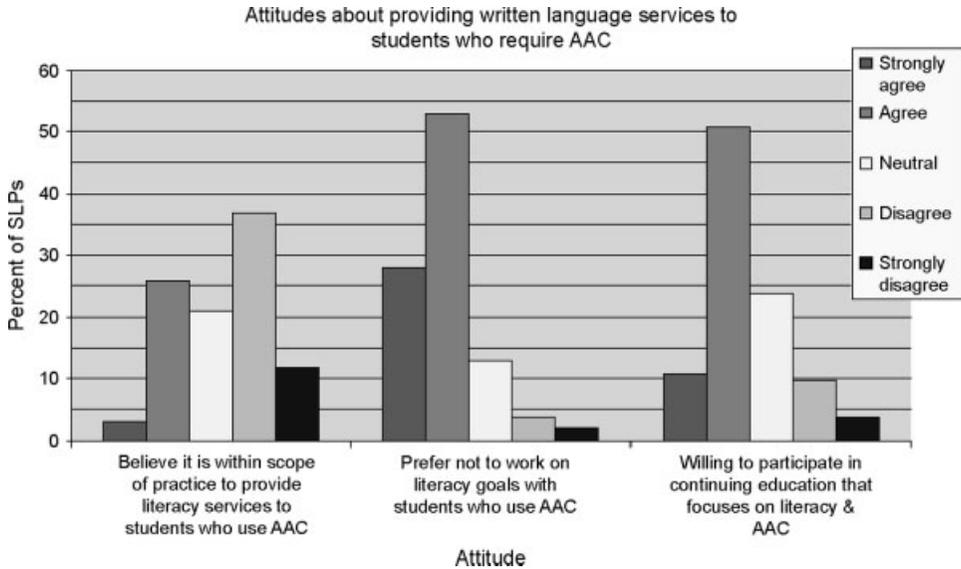
### Attitudes of Team Members

A second issue emerging from the results of the national SLP AAC and literacy survey<sup>11</sup> concerns the attitudes of SLPs responsible for addressing the literacy needs of students who use AAC. When asked their opinions surrounding this issue, participating SLPs reported overall negative attitudes toward providing written language services to students who use AAC. The majority of the participants indicated that they prefer not to address written language goals with students who use AAC (81%). Approximately half of the SLPs (49%) believed that it was not within their scope of practice to provide written language services to students who use AAC, and only 29% of respondents were in agreement that written language should be provided by SLPs to students who use AAC (Fig. 2).

Taken as a whole, the generally negative opinions about teaching literacy skills to students who require AAC are quite concerning. Although SLPs are not the primary literacy

educators, they are important members of the literacy teams, particularly when students have complex communication needs.<sup>16,17</sup> Further, it stands to reason that if SLPs trained both in AAC and written language are reporting this lack of expertise, it is probable that other members of literacy teams attempting to teach reading and writing skills to students who require AAC are experiencing the same struggles. The results of a survey study by Stark and colleagues support this assumption with 68% of SLP respondents indicating that AAC training deficiencies in teachers and teacher's assistants presented considerable barriers to service provision.<sup>9</sup> Data from the Fallon and Katz survey complement the current literature base and further substantiate claims that students with complex communication needs often do not receive quality, effective literacy instruction in the schools.

Combined with the many inherent difficulties involved in the literacy learning process for students who use AAC (e.g., lack of ability to participate in traditional instructional activities), these data present an important issue for consideration and warrant attention from AAC practitioners and researchers committed to the advancement of literacy services for students who require AAC. One important issue in need of attention is the successful preparation



**Figure 2** Attitudes about providing written language services to students who require AAC.

of expert professionals who can provide effective literacy services to students with complex communication needs. Second, the ability of these professionals to build literacy partnerships and successfully collaborate to guide students with severe speech impairments to literacy learning is paramount to successful literacy outcomes for these students.

### LOOKING AHEAD: POSITIVE CHANGE IN THE FUTURE

Advancement of the literacy services provided to students who use AAC must begin with an investment in the professionals responsible for providing reading and writing services. The advancement of professional expertise must involve a two-pronged approach that targets both preprofessionals and practicing personnel who will serve as members of literacy teams. Both preservice and in service education must include foundational information in AAC and literacy as well as strategies for adapting conventional literacy assessment and instruction to meet the unique learning needs of students with severe speech impairments. Professional development efforts should also provide strategies for building literacy partnerships so that collaborative services can be effectively provided by literacy teams who are responsible

for the literacy development in students who use AAC. Finally, continued research efforts are needed to advance literacy services for students with complex communication needs.

### Professional Development

Preservice preparation should involve the provision of theoretical and clinical AAC and written language instruction along with supervised clinical training experiences to ensure that the newest generation of professionals will receive the training to teach literacy skills to students with complex communication needs. To prepare individuals to provide effective literacy instruction, programs must impart knowledge and skills related to both written language (i.e., literacy assessment and instructional practices) as well as foundational AAC skills. Specifically, preservice instruction aimed at preparing professionals to provide high-quality written language services to students who use AAC should include theoretical and practical information in the following areas: (a) AAC principles and practice, including AAC technologies; (b) cognitive and linguistic components of literacy development including the critical skills required for literacy learning; (c) effective instructional techniques to teach reading and writing skills; and (d) effective

methods for adapting instructional techniques to meet the specific learning demands of students with complex communication needs.<sup>11</sup>

The literature suggests two primary formats for providing preprofessional AAC training: (a) offering separate, dedicated AAC courses or (b) embedding AAC content within related courses (e.g., childhood language disorders).<sup>18</sup> However, even if separate AAC courses are included in graduate training programs, it is necessary that students receive specific training in written language development, processes, assessment, and instruction. Further, graduate training programs must provide explicit instruction on integrating the necessary knowledge bases (i.e., AAC, language, and literacy) to ensure that students are adequately trained when they begin professional work in the schools.

### Continuing Education for Practicing Professionals

In service education activities for practicing professionals are also crucial in facilitating improved literacy services for students with complex communication needs. Repeatedly, the lack of professional training in AAC is cited as a factor related to ineffective literacy instruction for students who use AAC.<sup>12,13</sup> With a significant percentage of school-based SLPs providing services to students with AAC, it is critical that the SLPs have the knowledge and skills to provide written language services to these students. For all practicing professionals, especially those who have not received any formal instruction on providing literacy services to students who use AAC, ongoing training is essential.

Although it is important for school districts to offer opportunities for participation in quality AAC continuing education experiences, it is incumbent upon SLPs to take responsibility for their own professional growth by attending continuing education training and engaging in self-teaching activities (e.g., reading journal articles). Encouragingly, some research suggests that professionals are interested in and willing to participate in continuing education activities. For example, despite overall negative attitudes about providing literacy

services to students who use AAC, 62% of SLP participants ( $N=359$ ) from the Fallon and Katz survey study<sup>11</sup> did indicate a willingness to participate in continuing education activities that focus on the development of literacy skills in these students. Similarly, SLPs from the Florida Survey study indicated a desire for training in the area of AAC practice and further cited training deficiencies as barriers to effective service provision.<sup>8</sup>

### Collaborative Literacy Teams

The current literature repeatedly emphasizes the importance of using collaborative efforts to promote and support reading and writing skills for students with language impairments including students who use AAC.<sup>19,20</sup> With multiple educational specialists including classroom teachers, reading specialists, special educators, AAC specialists, and SLPs involved in the development of literacy skills, successful partnerships between these professionals is imperative for securing positive educational outcomes of students with written language impairments.

Although highly valued, and repeatedly emphasized, the research literature indicates that frequently, various educational personnel involved in literacy and AAC teams are not successfully forging collaborative relationships.<sup>20,21</sup> To remedy this problematic issue, preservice and in service trainings should address the necessity of collaborative partnerships for effective literacy services. Specifically, training should provide information about the roles and responsibilities of team members along with essential skills and strategies for building and maintaining successful AAC and literacy teams (e.g., conducting regular team meetings, effective communication among members, targeting common goals). Educational activities to promote collaborative practice should also include opportunities to observe successful AAC teams and participate in clinical team training experiences. With the necessary knowledge and skills to promote and participate in collaborative literacy teams, school-based personnel will be much more likely to develop and maintain literacy partnerships.<sup>21</sup>

### Future Research Directions

The future of school-based literacy instruction for students who use AAC depends not only on the availability of professionals who have the expertise but also on the accessibility of empirical studies to guide effective literacy interventions. Although the research base is growing, it remains relatively limited and in need of studies in several general areas. First, to further investigate the expertise of literacy teams who provide services to students who use AAC, the knowledge, skills, and attitudes of classroom educators, special educators, reading specialists, and other support personnel should be examined from two perspectives. First, studies to determine the self-perceived expertise of regular and special educators for providing literacy instruction to students with severe speech impairments would provide insight into the attitudes and professional needs of AAC literacy services providers. In addition, more objective evaluations of the quality and quantity of literacy instruction and interventions being delivered to students who use AAC are necessary in determining the state of literacy instruction in the schools. Evaluation of the effectiveness of personnel preparation and professional development efforts is another important research need. Finally, investigations are required to provide empirically-validated methods for building collaborative partnerships among literacy team members and evaluating the effectiveness of those teams in facilitating the literacy development of students with complex communication needs.

### CONCLUSION

The challenge of successfully teaching literacy skills to students who use AAC will only be met through the collective efforts of collaborative literacy teams with expertise in AAC practice and technologies, optimal skills to be targeted in reading and writing instruction, effective literacy instructional techniques, and methods for adapting instruction to meet unique learning demands. Although somewhat discouraging, results from the national literacy and AAC survey conducted by Fallon and Katz<sup>11</sup> shed light on some extremely important issues that may be negatively affecting the

literacy learning of many students with severe speech impairments. The results also offer the AAC field the opportunity to address several critical questions including *why* SLPs across the country feel negatively toward literacy service provision with students who require AAC and *how* this current prevailing attitude can be reframed into more positive attitudes and self-perceptions that will result in improvement of the quantity and quality of literacy services provided for students who require AAC. Reaching these important goals requires advances in several areas including (a) improvements in preparation of personnel responsible for providing literacy services to students with complex communication needs; (b) improvements in professional development of practicing professionals required to provide literacy services to students with complex communication needs; (c) the development of successful literacy partnerships between classroom educators, special educators, SLPs, reading specialists, parents, and other related school personnel; and (d) increased research studies focusing on the development and evaluation of literacy teams who provide services to students who use AAC. Expert, collaborative school-based literacy teams, guided by a strong base of empirically validated literacy instructional practices, are the critical elements needed to forge ahead in pursuit of positive literacy outcomes for all students with complex communication needs.

### REFERENCES

1. Foley BE, Pollatsek A. Phonological processing and reading abilities in adolescents and adults with severe congenital speech impairments. *Augment Altern Commun* 1999;15:156-173
2. Vandervelden M, Siegel L. Phonological processing and literacy in AAC users and students with motor speech impairments. *Augment Altern Commun* 1999;15:191-211
3. Fallon KA, Light J, McNaughton D, Drager K, Hammer C. The effects of direct instruction on the single-word reading skills of children who require augmentative and alternative communication. *J Speech Lang Hear Res* 2004;47:1424-1439
4. Millar D, Light J, McNaughton D. The effect of direct instruction and writers workshop on the early writing skills of children who use augmentative

- and alternative communication. *Augment Altern Commun* 2004;20:164-178
5. Dahlgren-Sandberg AD. Reading and spelling abilities in children with severe speech impairments and cerebral palsy at 6, 9, and 12 years of age in relation to cognitive development: a longitudinal study. *Dev Med Child Neurol* 2006; 48:629-634
  6. Dahlgren-Sandberg A, Hjelmquist E. Phonologic awareness and literacy abilities in nonspeaking preschool children with cerebral palsy. *Augment Altern Commun* 1996;12:138-154
  7. Sturm JM, Spadorcia SA, Cunningham JW, et al. What happens to reading between first and third grade? Implications for students who use AAC. *Augment Altern Commun* 2006;22:21-36
  8. National Reading Panel. *Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction: Reports of the Subgroups*. Washington, DC: U.S. Government Printing Office; 2000; NIH Publication No. 00-4754
  9. Koppenhaver DA, Evans DA, Yoder DE. Childhood reading and writing experiences of literate adults with severe speech and motor impairments. *Augment Altern Commun* 1991;7: 20-33
  10. Koppenhaver DA, Yoder DE. Classroom literacy instruction for children with severe speech and physical impairments (SSPI): What is and what might be. *Top Lang Disord* 1993;13:1-15
  11. Fallon KA, Katz LA. Written language & AAC in the Schools: a national survey. Poster presented at: ASHA National Conference; 2007; Boston, MA
  12. Simpson K, Beukelman D, Bird A. Survey of school speech and language service provision to students with severe communication impairments in Nebraska. *Augment Altern Commun* 1998;14: 212-221
  13. Stark C, Kent-Walsh J, Binger C. School-based AAC service delivery survey: demographic, service-delivery and SLP training. Paper presented at: American Speech-Language-Hearing Association Annual Convention; November 16, 2007; Boston, MA
  14. Lund SK, Light J. Long-term outcomes for individuals who use augmentative and alternative communication: part III - contributing factors. *Augment Altern Commun* 2007;23:323-335
  15. Koppenhaver DA, Hendrix MP, Williams AR. Toward evidence-based literacy interventions for children with severe and multiple disabilities. *Semin Speech Lang* 2007;28:79-89
  16. American Speech-Language-Hearing Association. *Scope of Practice for Speech Language Pathology*. Rockville, MD: American Speech-Language-Hearing Association; 2001
  17. Staskowski M. Reaching for the stars: SLPs shine on literacy teams. *Semin Speech Lang* 2003;24: 199-214
  18. Ratcliff A, Koul R, Lloyd L. Preparation in augmentative and alternative communication: an update for speech-language pathology training. *Am J Speech Lang Pathol* 2008;17:48-59
  19. Butler K, Nelson N, Roth F, Paul D. *Partnerships for Literacy: Principles and Practices*. Baltimore, MD: Lippincott Williams & Wilkins; 2006
  20. Ehren BJ, Ehren TC. New or expanded literacy roles for speech-language pathologists: making it happen in the schools. *Semin Speech Lang* 2001; 22:233-242
  21. Soto G, Muller E, Hunt P, Goetz L. Professional skills for serving students who use AAC in general education classrooms: a team perspective. *Lang Speech Hear Serv Sch* 2001;32:51-56