The Importance of Developing Communicative Competence

For Students with Significant Cognitive Disabilities

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The Importance of Developing Communicative Competence

The purpose of this paper is to outline the importance of developing communicative competence for students with significant cognitive disabilities at any age, to raise awareness of the current substantial issues in the provision of communication supports and services in schools in the United States, and to highlight some promising practices demonstrating success in developing communicative competence for students with significant cognitive disabilities. We advocate for students with significant cognitive disabilities to receive early intervention addressing the provision of augmentative communication, to develop a level of communicative competence by school-age, and to be supported to use augmentative communication in order to maximize their access to and progress in the general curriculum. Further, we recommend accountability structures within the educational system and professional development for educators and speech-language pathologists regarding communicative competence for students with significant cognitive disabilities.

Augmentative and alternative communication (AAC) includes all forms of communication (other than oral speech) used to express thoughts, needs, wants, and ideas. We all use AAC when we make facial expressions or gestures, use symbols or pictures, or use print. Special aids, such as picture and symbol communication boards and electronic devices, are made available to help people express themselves. Doing so increases social interaction, school performance, and a sense of self-worth.

All children communicate and can develop communicative competence. People with severe speech or language problems rely on AAC to supplement existing speech or replace speech that is not understandable and other methods of communication that are nonconventional. The ultimate goal of AAC for students in educational settings is to provide a vehicle for communication, social interaction, and engagement in academics, and other school-related activities (e.g., extra-curricular, work-study). Beukelman and Mirenda (2005) have discussed the "tendency to provide AAC students with communication systems that are solely designed to address wants/needs and social interaction functions rather than the information-sharing functions that are integral to classroom participation"(p. 420).

In the past, teachers and therapists believed that children had to demonstrate certain cognitive skills before they would benefit from communication services. Indeed, the interactions between the domains of cognition and language are certainly complex. In fact, sometimes teaching new communication skills can help a child develop other thinking skills. While a child's cognitive age may be used to inform where along the continuum of communication he or she will begin the intervention process, the appearance of cognitive deficit should never be used to deny providing communication services and support (National Joint Committee for the Communication Needs of Persons With Severe Disabilities, 2003b).

In a recent study of students with significant cognitive disabilities participating in alternate assessments on alternate achievement standards across multiple states, Kearns, Towles-Reeves, Kleinert, Kleinert, and Thomas (in press) found that the majority of these students communicated using oral speech or symbol based augmentative communication systems. A small percentage of students were identified by their teachers as using facial expressions, body movements, and cries to communicate expressively and some are characterized as having inconsistent receptive responses across all grades up to and including high school. Of the students judged to need AAC,

more than half did not have augmentative communication systems. Furthermore, this study did not describe the extent to which the AAC included academic content, but simply that the student used or did not use AAC.

Of all the groups of students with significant cognitive disabilities, we find that this group - those not yet using symbols for communication - presents the most unique challenges for schools. Vigilance is warranted, however, as some students in this group have simply not received the services and supports they need to develop communicative competence. This misidentification and subsequent failure of service are tragic but sadly not uncommon.

- **Consider Robert**. Robert was a high school student who has cerebral palsy who did not use oral speech. He received services in a self-contained class for students with intellectual disabilities. He received only consultation services from a speech/language therapist due to 'failure to make progress in using oral speech'. In preparation for transition, a new teacher recognized that Robert had not been appropriately identified or served, and requested the assistance of speech/language expert *external to the school and district*. As a result, Robert received a touch screen computer with voice output communication device. Robert used that device to answer math questions, as displayed on a mathematical graph, within days of receiving his device.

It is clear that a series of unfortunate errors in the education system and low expectations from the IEP team across a number of years had reduced Robert's ability to communicate, and thus has denied him access to the general curriculum. Sadly, Robert exited school this year without a high school diploma and without even the communication device, which will gravely limit the opportunities available to him after high school, and as the literature has shown, also place him at serious risk for neglect and even abuse (Cox-Lindenbaum & Watson, 2002). Robert's story illustrates an unfortunate example of a systemic failure of education and of the IEP team. Accountability within the education system for the provision of augmentative communication services and supports remains absent. IEP teams are additionally limited by the knowledge they have available to them and the extent to which they have access to high quality professional development and technical assistance. Given the American Speech-Language-Hearing Association (ASHA) ethical practice guidelines, speech/language pathologists (SLPs) should seek technical assistance for any student who needs to develop communicative competence, regardless of availability if SLPs are unsure about how to provide services themselves (American Speech-Language-Hearing Association, 2010a; ASHA, 2002; National Joint Committee for the Communication Needs of Persons with Severe Disabilities, 2003b).

- **Consider Melissa** – Melissa, a high school student with significant cognitive disabilities communicates with cries, body movements, and facial expressions. After talking to her mother about activities that Melissa loved, she was provided with a switch requesting a favorite music selection (a favorite activity for her). In as few as eight trials, Melissa requested consistently by using the switch to request "music please". In Melissa's case, we aren't sure about "tested" cognitive abilities, but improving requesting is the first step in helping others see her communicative potential and at a minimum, improving her skills in requesting assistance. The consistent use of a switch to request assistance will improve Melissa's overall communicative competence and lead to other opportunities to make choices in everyday activities.

Both stories represent the serious challenges that result when communicative competence is not identified as the highest priority in any student's educational program. Given that both of these students were likely identified as needing specialized supports and services from infancy, the continued lack of supports and services years later suggests a serious need for professional development and training for the wide range of professionals who work with these children and youth.

Communicative Competence Defined

Communicative Competence should accomplish four main purposes including: expressing wants and needs, developing social closeness, exchanging information, and fulfilling social etiquette routines (Light, 1997). Light (1997) has described communicative competence as "being able to meet the changing demands and to fulfill one's communication goals across the lifespan" (p. 63). For example, "infants communicate primarily to express wants and needs and to develop social closeness," whereas "school-aged children need the means and skills to meet all four communication goals" (p. 62). Similarly, Buekelman and Mirenda (2005) recommended that chronologically age matched students without disabilities provide the communication target with which we do our discrepancy analysis. In other words, we are always continuing to develop AAC for students until they can communicate the same things (academically and socially) to the same extent as students without disabilities.

Researched-based Interventions to Improve Communicative Competence

Snell et al. (2010) recently reviewed twenty years of literature examining the development of communicative competence among students with significant cognitive disabilities. Most notably, these researchers found that ninety-six percent (96%) of the reviewed studies reported positive changes in some aspects of communication for most students. These findings support unequivocally the provision of communication intervention for persons with severe intellectual and developmental disabilities.

In terms of the length and intensity of time required to see results of a communication intervention, Rowland and Schwiegert (2000) found that most students experienced success with as little as 15 minutes per day of instruction over an average of 6.5 months. These children experienced varying sensory and multiple disabilities, and were also identified as having no functional symbolic communication skills. Indeed, twenty-eight of the participants learned novel symbols within the first three exposures. These authors concluded, "no single handicapping condition among our participants was exclusively associated with the outcome of intervention" (p. 74).

That is to say that no student is too severely cognitively disabled to benefit from communication supports and services. Clearly, the research shows that students with the most significant cognitive and sensory disabilities can learn to use symbolic, augmentative communication *in six months or less*.

The Importance of AAC combined with Literacy Instruction

In their review of the literature regarding AAC for children with significant disabilities, Romski and Sevcik (1997) cited many examples in which children with limited cognitive and language skills learned to use AAC successfully. Application of this knowledge in our schools is central to the educational success of students with significant disabilities. Indeed, the importance of AAC in supporting access to and progress in the general curriculum, in particular literacy skills, cannot be underestimated.

Despite the evidence-based research indicating that even students with multiple and developmental disabilities can benefit from literacy instruction, including phonemic awareness, reading and writing programs (Fallon, Light, McNaughton, Drager, & Hammer, 2004; Light, McNaughton, Weyer, & Karg, 2008; Millar, Light & McNaughton, 2004), Strum et al. (2006) reported that unfortunately "most students who use AAC do not become conventionally literate and few of those who do achieve literacy skills beyond the second grade level" (p. 21). Similarly, Light and McNaughton (1993) suggested that without functional literacy skills, individuals who use AAC systems are severely restricted in their access to educational and vocational opportunities" (p. 33). Our opening story about Robert illustrates this important point.

Early Communication Intervention

Romski and Sevcik (2005) have described the many roles AAC may play in facilitating communicative competence in young children with complex communication needs. The authors have explained:

> Using a developmental perspective, AAC interventions can be viewed as a tool that aids or fosters the development of early language skills and sets the stage for later vocabulary development and combinatorial language skills regardless of whether the child eventually talks or not. In fact, it is critical that AAC be introduced before communication failure occurs. AAC is not only for the older child who has failed at speech development but also for a young child during the period when he or she is just developing communication and language skills, to prevent failure in communication and language development (pp. 178-179).

Romski and Sevcik further cited many research studies documenting the efficacy of communication services and supports provided to infants, toddlers, and preschoolers with a variety of severe disabilities. Beukelman and Mirenda (2005) explained that many students with severe communication disorders unfortunately enter elementary school without communication systems that permit them to participate in typical curricular activities. Thus, "it is important to ensure that by the time children who use AAC reach first grade, they have the tools necessary for academic participation and instruction" (p. 392). In order for children with significant cognitive disabilities to access the academic standards in early primary (kindergarten through grade 2), communicative competence is essential. To accomplish this important goal, system level supports must include the following:

- All professionals providing services to students with significant cognitive disabilities must practice and respond consistently ACROSS disciplines. This includes educators, speech language pathologists, and other related service personnel (Rainforth, York, & Macdonald, 1992)

- Early intervention supports for communication, as well as transition to school services, must prioritize the development of communicative competence as a matter of first priority on the student and family individual service plans (Light & Drager, 2007; Romski & Sevcik, 2005)
- Students with significant cognitive disabilities must transition from preschool services to kindergarten demonstrating communicative competence similar to that of their kindergarten peers with AAC, if they are to maximize their right to a "free appropriate public education". This is important if students are to gain full access to the general curriculum (Beukelman & Mirenda, 2005).
- Student documentation (included with the IFSP and IEP) should also include video-taped records of the student's present level of communicative competence. This is to ensure smooth transmission of accurate information on the student's communication and his/her use of AAC.

Collaborative Planning: A Cornerstone for Success

A cornerstone to delivering the supports and services which foster communicative competence among students with significant cognitive disabilities is collaborative, transdisciplinary teaming (Rainforth, York, & McDonald ,1992). Hunt, Soto, Maier, Muller, and Goetz (2002) evaluated the effectiveness of a team collaboration process designed to increase the academic, communication and social competence of three students with severe disabilities with AAC needs within an inclusive educational setting. Hunt et al. found that collaborative teaming supported by a unified planning process resulted in:

- increased levels of student initiated interactions,
- increased use of AAC,
- decreased levels of assistance provided by the instructional assistants, and
- increased engagement in classroom activities.

A particular strength of their planning process was its integration of supports in classroom activities. As a result, all three teams reported substantial gains in the students' academic performance. "The general education curriculum became the context for intervention, and academic and social participation became the ultimate goals" (p.-34).

Similarly, Calculator and Black (2009) followed the work of Jackson, Ryndak, and Billingsley (2000) in identifying 91 evidence-based practices around eight major themes for the use of augmentative communication and inclusion of students with significant disabilities. The resulting themes included the following: "promoting inclusive values; collaboration between general and special educators; collaboration between educators and related service providers family involvement; choosing and planning what to teach (which included the topic of challenging behaviors); scheduling, coordinating and delivering inclusive services; assessing and reporting student progress; and instructional strategies" (p. 330). These authors emphasized the importance of academic and social interactions among peers and adults, frequent opportunities to practice, and use of AAC in academic content using evidence-based practices.

In teaching literacy skills to students with significant cognitive disabilities, Fallon and Katz (2008) supported the importance of *collaborative literacy teams,* including both teachers and SLPs, and emphasized that " 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" (p.117).

These studies demonstrate the positive impact of a collaborative cross-disciplinary team in facilitating the academic and communicative competence for students with significant disabilities by incorporating many of the key evidence-based components described by Calculator and Black (2009).

Professional Development Needs

The American Speech-Language-Hearing Association surveys school-based SLPs every two years to determine information regarding speech/language service delivery. Among the information included in those surveys are questions about the type and needs of students who receive such therapy in the school settings. Below is a summary of the numbers of SLPs who serve students with significant disabilities and the use of AAC with such students. As can be seen in the chart below, between 70-90% of school-based SLPs have seen students with significant disabilities over the past 10 years. However the number of SLPs serving students described as "non-verbal, AAC" has dropped from a high of 65% in 2000 to 45-53% for the years 2008 and 2010. No reason for this drop is provided in the survey, but in light of the data from the Kearns et al. (in press) study described earlier, indicating that 50% or more of students who are not using symbols also do not have AAC devices, the findings from the ASHA schools survey indicate the need for further investigation. Figure 1 illustrates the ASHA Survey Results.

Figure 1: 2006/2008/2010 American Speech-Hearing-Language Association Schools Survey

	2000	2004	2006	2008	2010
% of SLPs who serve students with significant disabilities	90% Mental Retardation/ Developmental Disabilities	74% Mental Retardation/ Developmental Disabilities	71% Mental Retardation/ Developmental Disabilities	21.3% SPH 85%(autism) 71% MR/DD 50% Nonverbal	76% Cognitive Impairment and Developmental Disability 53% Non-verbal 88% Autism
% of SLPs serving students non-verbal, AAC	62%	49%	50%	45%	53% Non-verbal, AAC Mean no. of students seen per SLP who serves such students 4.6

(ASHA, 2010b, 2010c)

There are several key barriers related to the limited use of AAC with individuals and students in this population. The National Joint Committee for the Communication Needs of Persons With Severe Disabilities (NJC) (2003a) position statement delineates several of these factors under the overarching theme of eligibility concerns. This report states, "Eligibility determinations based on a priori criteria violate recommended practice principles by precluding consideration of individual needs. These a priori criteria include, but are not limited to: (a) discrepancies between cognitive and communication functioning; (b) chronological age; (c) diagnosis; (d) absence of cognitive or other skills purported to be prerequisites; (e) failure to benefit from previous communication services and supports; (f) restrictive interpretations of educational, vocational, and/or medical necessity; (g) lack of appropriately trained personnel; and (h) lack of adequate funds or other resources" (p. 2).

Preservice, Professional Development, Service Delivery Models, and Accountability Structures

The question arises as to the need for accountability structures and professional development for IEP teams in this area. A review of the past decade of surveys of school-based SLPs by the American Speech-Language-Hearing Association reveals the following

- One quarter of SLPs responding to the survey in the 2000, 2004 ASHA Schools Surveys listed "lack of training for special populations" as one of the greatest professional challenges of clinical service providers.
- Almost 20% of SLPs responding to the 2006 ASHA Schools Survey listed "lack of training for low incidence populations" as one of the greatest professional challenges of clinical service providers.
- Between 20-28% (an average across grade-bands of 23.9 %) of SLPs in the 2008 Schools Survey listed "lack of training for" ELL, Hearing related; AAC and low incidence disorders as one of the greatest challenges of clinical service provision in the schools.

And still, in 2010, 24% of SLPs responding to the ASHA Schools Survey listed lack of training in **AAC** ***assistive technology, low incidence populations, curriculum based instruction***, English language learners and hearing technology ***among their greatest challenges in service delivery in*** *the schools.*

Another variable affecting the use of AAC for students with significant cognitive disabilities in the schools may be the high number of students that school-based SLPs see each week. In the 2010 ASHA schools survey, 50% or more of SLP respondents noted that there are more SLP positions open than job seekers. A full 81% of SLPs reported such shortages increased their caseload and approximately 50% of respondents indicated this lack of qualified SLPs in the schools affected the quality of service deliver to students, as well as contributing to a lack of time for meeting with team members. SLP caseload size varies across the country (as defined by state regulations) from 30-80 students per SLP in the schools with an average of 50 students per

clinician. While ASHA encourages the use of a "workload" calculation (i.e., determining the size of an SLP's student number based on both the number of students PLUS the SLP's additional duties, which might include greater time necessary to meet the needs of students with severe disabilities, among other duties), rather than a simple caseload assignment (regardless of severity levels of the students), 82% of SLPs responding to the 2010 ASHA School Survey used only the caseload approach in the determination of the number of students seen.

Best practice as noted by Calculator and Black (2009) included the importance of team collaboration, meeting with families, team decision making, and coordinating the AAC or communication system for students with severe disabilities within the academic and social program throughout the day. In light of the heavy burden given to the school-based SLP in most states, these practices may not be achievable without a systemic change toward workload models and away from caseload models.

Recently, Siegel, Maddox, Ogletree, and Westling (2010) surveyed school-based speech-language pathologists (SLPs) to examine opinions and practices regarding communication-based services to students with severe disabilities in school settings. The results of this study indicate SLPs may not be providing best practice services to individuals with significant cognitive disabilities. These authors state, "considering the variety of communication skills and needs demonstrated by individuals with severe disabilities, there may be a need for both professional development opportunities that provide knowledge related to best practices, as well as hands-on, practical support for individuals implementing best practices in the field" (p. 149).

Finally, given the findings revealed by the Kearns et al (in press) study of students participating in the alternate assessment, their learner characteristics and provision of AAC, states might consider ways to increase accountability to schools to provide AAC early in students' educational programs. This might be accomplished, for example, by a formal review as part of State Educational Agency (SEA) Progress Monitoring efforts or SEA screening criteria for students and their participation in the alternate assessment system. Special education teachers also need skills and competencies related to developing communicative competence, as well as competences related to teaching students to use AAC. Downing (2001) found that intentional communication is often difficult to delineate in individuals with severe and multiple disabilities, as the form of communication is highly individualized and relies on the communicative partner to determine or assign intent. Indeed, Carter and Iacono (2002) found that educators and SLPs demonstrated poor levels of consistency in identifying student behaviors that were judged to be non-intentional communicative acts, and suggested "it seems that the judgments of both special education teachers and speech language pathologists were not being made in accordance with published criteria for distinguishing preintentional and intentional communication" (p. 187).

These studies suggest that teachers and SLPs may lack the skills and knowledge needed to accurately interpret the communicative acts and identify the communicative levels of students with severe disabilities, and implement evidence-based communication programs for this population.. Thus, professional development becomes a critical component in assisting the IEP team in identifying communicative intent and designing effective plans and programs to meet the communication of needs of students with severe disabilities.

Summary

The purpose of this paper was to outline the importance of developing communicative competence for students with significant cognitive disabilities at any age and the promising practices demonstrating success in developing communicative competence for this population. Notably, we advocate for students with significant cognitive disabilities to enter kindergarten with communicative competence and using AAC in order to maximize their access to the general curriculum. Further, we identified the need to create accountability structures within the educational system and to provide professional development to teachers and speech-language pathologists about developing communicative competence for students with significant cognitive disabilities.

Without AAC, students like Robert or Melissa may appear to not be making progress in communicative competence or developing cognitive or academic skills. Indeed, the following outcomes will result only when when communicative competence and AAC are considered:

- Students are able to display their actual level of cognitive and communication competence.
- Students have the opportunity to LEARN and DEVELOP symbolic communication continuously from early intervention throughout their educational career.
- With appropriate supports and instruction, students do continue to make progress in communicative competence and use of symbolic language into adulthood – (though this presumes that services should be continued after students do make that initial progress!) (NJC, 2003b).
- Academic content is *by definition* symbolic content – access to the general curriculum is only meaningful if one can understand and express that content.
- In order to maximize educational opportunities, students must come to kindergarten with AAC and use of symbolic language.
- There is no more fundamental support for and outcome of education than the *right* and the *ability to communicate*. ((NJC, 2003)

On the other hand, without the provision of communication intervention and the provision of AAC, we find:

- Lack of communication competence is highly predictive of poor post-school outcomes (Kleinert et al., 2002).
- If the use of AAC is *not* offered to these students, they are less likely to learn and evidence symbolic behaviors.
- Without use of AAC, students with significant disabilities cannot indicate their true abilities and do not have access to literacy, which is essential to participation on the school curriculum.

We endorse the National Joint Committee Communication Bill of Rights (1992) and recommend that school teams consider each of these fundamental rights in devising programs to improve

communicative competence. Students should learn to request, refuse, express preferences, choose or reject options, and request and receive attention and information. In order to learn these pragmatic functions, students must have systematic intervention and AAC to fully achieve communicative competence that is clear, meaningful, culturally and linguistically appropriate (NJC, 1992).

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