A History of Augmentative and Alternative Communication for Individuals with Severe and Profound Disabilities

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Augmentative and alternative communication (AAC) is a prominent component in the development of support services for individuals with disabilities, especially those with severe disabilities. In this article we provide an overview of the historical development of AAC services, tracing their evolution over the past half-century through four specific themes: social change and legislation, assessment, intervention, and family and cultural issues.

Perhaps the single quality most central to humanness is the ability to exchange thoughts, ideas, and feelings with others. The importance of the capacity to connect with other people cannot be overstated. Helen Keller was once asked, if she could have either her vision or her hearing, but not both, which would she choose? Without hesitation, she replied, “My hearing.” When asked why, she responded, “Blindness separates a person from things, but deafness separates him from people” (italics added; National Information Clearinghouse on Children Who Are Deaf-Blind, n.d.).

Persons with severe and profound disabilities may be especially vulnerable to this problem of separation from the mainstream of society. Federal legislation has defined persons with severe disabilities as those “who because of the intensity of their physical, mental, or emotional problems, need highly specialized education, social, psychological, and medical services in order to maximize their full potential for useful and meaningful participation in society and for self-fulfillment” (42 C.F.R., §315.4(d)). Many individuals who have severe disabilities experience substantial difficulties in communicating effectively with those around them (Siegel & Wetherby, 2000).

Technologies such as augmentative and alternative communication (AAC) systems can help to minimize this separation from other people. An AAC system is an “integrated group of components, including the symbols, aids, strategies, and techniques used by individuals to enhance communication” (American Speech-Language-Hearing Association, 1991, p. 10). These technologies range from relatively low-tech systems (i.e., simple adaptations with no batteries or electronics, such as communication boards and conversation books) to high-tech devices (e.g., complex electronic or computer-driven technologies; Idaho Assistive Technology Project, 2002).

Importance of AAC History

AAC emerged in the 1950s and 1960s as an avenue for communication for those individuals (largely people with significant disabilities) who had not developed the more traditional communication skill of speech. During its brief history, AAC has undergone remarkable changes. For example, the fundamental nature of assessment in AAC has evolved from a candidacy model, in which persons were to demonstrate eligibility for an AAC system by attaining certain prerequisite skills, to the contemporary universal model, which is based on the premise that anyone can communicate and benefit from AAC services. Similarly, the essential philosophy of AAC service provision has evolved from a focus on isolated skills taught during pullout therapy to an inclusive model, wherein functional communication skills are taught within natural environments.

AAC systems may be roughly classified into one of two categories: unaided com-
munication systems and aided communication systems (Beukelman & Mirenda, 1998; Romski & Sevcik, 1988). Unaided AAC systems do not require any sort of external communication device for production of expressive communications. Sign language, facial expressions, gestures, and nonsymbolic vocalizations are all unaided modes of communication. Aided systems require an external communication device for production. Examples of aided systems include the use of picture communication boards and voice-output devices (Beukelman & Mirenda, 1998; Miller & Allaire, 1987).

Perhaps the most dramatic change in AAC has been the explosion in the availability and capabilities of technology. The advent of the microcomputer led to the development of user-friendly communication devices with sophisticated voice output. These advances have led to communication options and possibilities for persons with severe disabilities that were unavailable even a decade ago.

Social Change and Legislation

In the Beginning (1950–1970)

Throughout the 1950s and 1960s, the mainstream of American society was developing greater awareness of, and sensitivity to, the rights of individuals from minority backgrounds. This included individuals from racial and cultural minority groups, as well as individuals with disabilities. The civil rights movement of the 1960s secured a variety of rights for individuals with disabilities. The civil rights movement served as a template for subsequent advocacy, litigation, and legislation for individuals with disabilities.

The leadership of President John F. Kennedy, and his close personal relationship to mental retardation (his older sister was diagnosed with mental retardation), helped foster public awareness of mental retardation specifically, and disability in general. In 1961, the President’s Panel on Mental Retardation (now the President’s Committee for People with Intellectual Disabilities) asked America to address the significant needs of people with mental retardation, especially their desire to be part of everyday life in America (Administration for Children and Families, n.d.). This enhanced public awareness of mental retardation led to efforts to increase the habilitation of persons with a variety of developmental disabilities, including the development of AAC (Zangari, Lloyd, & Vicker, 1994).

Emergence of AAC (1971–1980)

The passage of the Education for All Handicapped Children Act (P.L. 94–142) in 1975 was a milestone in the provision of school-based services for persons with disabilities (Beukelman & Mirenda, 1998; Vanderheiden & Yoder, 1986; Zangari et al., 1994). P.L. 94–142 was the first federal legislation to mandate the provision of special education services to all school-aged students with disabilities, requiring that the public schools provide a free, appropriate education and related services in the least restrictive environment. Though it did not specifically address augmentative communication, implications of the legislation facilitated the provision of AAC services (Vanderheiden & Yoder, 1986).

With the passage of this legislation, a generation of students previously denied access to educational services entered the nation’s public schools. It became necessary for public school teachers and therapists to seek out and develop innovative programs to facilitate the transition of these children into more mainstream environments (Vanderheiden & Yoder, 1986). This development significantly enhanced widespread acceptance of AAC.


Legislation passed during the 1980s reflected growing awareness of the power of assistive technology, including augmentative communication technology, to enhance the lives of individuals with disabilities. The Education of the Handicapped Act Amendments of 1986 (P.L. 99–457) provided technological services for school-aged children with disabilities. Part G of this legislation specifically required public school districts to promote the use of technology with students who had disabilities (Dugan, 1986). In addition, the Technology-Related Assistance for Individuals with Disabilities Act (P.L. 100–407), passed in 1989, required states to make every reasonable attempt to provide assistive technology to citizens with disabilities, regardless of age, disability, or location of residence (Beukelman & Mirenda, 1998; Zangari et al., 1994). These laws expanded access to assistive technologies, including AAC.

The Contemporary Period (1991–Present)

During the 1990s, educational programs for students with severe disabilities increasingly incorporated access to (a) the general education curriculum and (b) community resources. Increasingly, these students were being educated within general education classrooms, rather than in “pullout” settings (e.g., Sailor, Gec, & Karasoff, 2000; Westling & Fox, 2004). Greater provision of AAC services can be seen as the direct result of inclusion, as teachers sought ways for children with severe disabilities to participate more comprehensively and successfully within inclusive environments (Zangari et al., 1994).

As societal values evolve, commensurate legislation typically follows. In 1991, the 1975 Education for All Handicapped Children Act was reauthorized and renamed the Individuals with Disabilities Education Act (IDEA). In 1997, amendments to IDEA specifically targeted AAC. These amendments mandated (a) individual assessment of assistive technology needs, including augmentative communication, and (b) consideration of these needs on each student’s Individualized Education Program (Beukelman & Mirenda, 1998; Zangari et al., 1994).

Assessment Practices

In the Beginning (1950–1970)

Early AAC assessment practices focused on identifying those select individuals...
who had the prerequisite skills believed necessary to benefit from speech therapy. The two primary prerequisites were (a) the ability to make or imitate sounds and (b) the cognitive ability to comprehend and learn verbal language (Bricker, 1972; Kent, Klein, Falk, & Guenther, 1972; Stark, Rosenbaum, Schwartz, & Wisan, 1973). Other prerequisite skills included the ability to remain seated in a chair, attend to task, and establish satisfactory eye contact (Kent et al., 1972). Individuals who did not possess these prerequisites remained in “readiness” programs and frequently never progressed to functional language programs (Beukelman & Mirenda, 1998).

**Emergence of AAC (1971–1980)**

During the 1970s many interventionists were hesitant to provide AAC to people who were believed to have the potential to develop verbal speech (Beukelman & Mirenda, 1998). Therapists tended to wait until they were certain the individual would not acquire natural speech. Unfortunately, hindsight reveals that these individuals were often denied a means of communication during critical periods of language acquisition (Beukelman & Mirenda, 1998; Kangas & Lloyd, 1988; Romski & Sevcik, 1988). The so-called Candidacy Model was the primary approach to AAC assessment during this period and helped guide professional decisions about (a) whether an individual might be a potential candidate for AAC and (b) when to begin the use of augmentative communication (Beukelman & Mirenda, 1998; Musselwhite & St. Louis, 1988). The widespread Cognitive Hypothesis model held that persons must reach a particular level of cognitive development and attain certain prerequisite skills (e.g., receptive language) before they were considered viable candidates for AAC services (Kangas & Lloyd, 1988; Romski & Sevcik, 1988).

Additional developmental criteria were often required. If a child’s cognitive development, receptive language, language production, and expressive communication were all roughly equivalent, he or she was not considered an appropriate candidate for a nonvocal system (Chapman & Miller, 1980). As a result, people with severe and/or profound cognitive disabilities and equivalent communication needs were usually excluded from receiving AAC services.


The growth in the sophistication of communication technologies, along with associated changes in intervention methodologies, led to a substantial rethinking of assessment practices. In the Communication Needs Model (Beukelman & Mirenda, 1998), the primary goal was the reduction of an individual’s unmet communication needs. Assessment practices based on the Communication Needs Model sought to identify (a) the individual’s current communication needs and (b) the degree to which those needs were being met. This approach shared several considerations with previous candidacy models, including evaluations of (a) cognitive ability, (b) chronological age, (c) oral-motor abilities, and (d) current speech production. Additional considerations included emotional factors, previous therapy, and environment (Musselwhite & St. Louis, 1988).

The first step in the assessment process was determination of candidacy for an augmentative communication system (Musselwhite & St. Louis, 1988). Once candidacy was confirmed, assessment focused on selection of an appropriate augmentative communication system. Possibilities included both aided and unaided systems. The final step was to decide on goals for implementation of the system (Musselwhite & St. Louis, 1988). This model was less restrictive than its predecessor, the Candidacy Model, but still failed to adequately incorporate consideration of the communication needs of individuals with severe developmental disabilities.

**The Contemporary Period (1991–Present)**

Contemporary assessment procedures can best be characterized as fitting the Participation Model, which holds that all persons with severe disabilities can achieve enhanced communication ability. This perspective makes it a “strength model,” a departure from previous deficit-based models (Kroth & Bolson, 1996). Its two major underpinnings are communication opportunity and communication access (Mirenda & Iacono, 1990).

In the initial stage of the Participation Model, the language professional assesses the current communication patterns and needs of an individual throughout his or her daily routines, including communication opportunities and access barriers within daily environments. This is followed by a detailed assessment of future communication needs. A variety of environments beyond the current ones are considered. Once these assessments are in place, responsive interventions are planned for the identified current and future communication needs (Beukelman & Mirenda, 1998).

**Intervention Practices**

**In the Beginning (1950–1970)**

Early intervention practices for individuals with significant communication needs made little distinction between language and speech (Bryen & Joyce, 1985). This practice was based on research conducted with linguistically typical children, not with children who had language or developmental disabilities (Bricker, 1972), and led professionals to conclude that communication development in children with cognitive disabilities took place more slowly than with typically developing children but in much the same succession (Bryen & Joyce, 1985; Guess, Sailor, & Baer, 1974, 1977; Miller & Yoder, 1974). Consequently, the majority of available language intervention programs focused on speech development.

Two approaches to speech/language intervention were especially prominent during this time: the psycholinguistic approach (Bricker, 1972; Bryen & Joyce, 1985; Guess et al., 1974; Kent, Klein, Falk, & Guenther, 1972; Stark et al., 1973) and the behavioral approach...
(Bryen & Joyce, 1985; Guess et al., 1977; Guralnick, 1972; Stark et al., 1973). The psycholinguistic approach, also known as the structural grammar approach, was developmental in nature and focused on the development of various elements of language, including an understanding of grammar and syntax. The ultimate goal of this intervention, largely based on normal language development, was the acquisition of oral language.

The behavioral approach relied on principles of applied behavioral analysis to teach speech to children with language deficits. This approach included such instructional components as systematic data collection, structured prompts and cues, and the delivery of reinforcers for skill acquisition (e.g., Alberto & Troutman, 2003), as well as the development of imitative ability and gradual shaping of correct verbalizations (e.g., Stark et al., 1973). Rather than attempting to follow a strict developmental hierarchy, the behavioral approach focused on teaching those speech skills most likely to “pay off” (i.e., be reinforced; Guess et al., 1974, 1977). When augmentative communication was part of an intervention, typically it was in the form of such unaided systems as natural gestures and sign language (Bryen & Joyce, 1985; Miller & Allaire, 1987).

At that time, the goal of incorporating manual signs and other unaided systems was to elicit speech (Larson, 1971; Miller & Allaire, 1987; Stremel-Campbell et al., 1977; Zangari et al., 1994). However, by the mid-1970s a few professionals began to advocate for an increase in the use of sign language with persons who had severe disabilities, suggesting the then-revolutionary notion that sign language could be useful even for individuals with no hearing loss, and could even become the primary mode of communication for them (Stremel-Campbell et al., 1977).

The use of sign language as a basic means of communication had a number of advantages. Speed of communication was enhanced through the use of sign language. In addition, because sign language does not rely on external devices, portability was not a concern (Stremel-Campbell et al., 1977). However, these unaided systems also had significant drawbacks. First, relatively few people in the general public understand sign language. In addition, people with significant cognitive disabilities who use sign language tend to use approximations, which further limits potential communication partners. Last, many individuals with severe disabilities have concomitant limitations in fine-motor ability, which further restricts effective use of sign language (Stremel-Campbell et al., 1977).

A limited number of aided systems were used during this time. A common approach was the use of a communication board, with symbols consisting of pictures and/or written words (Deich & Hodges, 1977; Dixon & Curry, 1973; Lorrett, 1969). However, often these were used only as a last resort, as many practitioners were concerned that these systems would impede subsequent acquisition of speech. In addition, use of augmentative communication was seen as a passing fad by some (Moore, 1980). Professional resources published during this period yielded little information about the development or use of communication boards (McDonald & Schultz, 1973).

Emergence of AAC (1971–1980)

Interventionists and researchers began to recognize that delays in cognitive and social development significantly affect the development of communication skills (Bryen & Joyce, 1985; Harris-Vanderheiden & Vanderheiden, 1977). As a result, previous held views about the development of language in children with mental retardation and associated developmental disabilities came into question (Chapman & Miller, 1980). The focus of communication research shifted from the structure of language to the pragmatic functions of language, defined as the relationship between communicative behavior and the social contexts in which it occurs (Reichle, 1997). Intervention practices moved from teaching grammar, syntax, and other structures of language to a greater focus on the function of language as a social behavior (Bryen & Joyce, 1985; Reichle, 1997). Too often, individuals with significant developmental disabilities mastered only limited verbal language skills and did not acquire truly functional communication (Zangari et al., 1994). Consequently, augmentative communication strategies became more attractive.

In the emerging new paradigm of language intervention for individuals with severe disabilities, speech was no longer considered the ultimate outcome of intervention. Sign language and other augmentative communication techniques increasingly were viewed as acceptable alternatives to speech (Bryen & Joyce, 1985). The growth of alternative communication systems was accelerated by the growing recognition that AAC did not impede development of natural speech, and perhaps even enhanced it (Bonvillian, Nelson, & Rhyne, 1981; Harris-Vanderheiden & Vanderheiden, 1977; Kiernan, 1983; Silverman, 1980; Stremel-Campbell et al., 1977).

Despite the increased recognition that naturalistic teaching leads to greater acquisition and generalization of functional communication skills, most language intervention continued to occur in isolated situations (Bryen & Joyce, 1985). The spontaneous, generalized use of language was not a typical focus. However, traditional therapy in language-training environments was being combined with AAC intervention in natural environments (Bryen & Joyce, 1985; Harris-Vanderheiden & Vanderheiden, 1977).

Language intervention during this era initially was behaviorally based (e.g., Guess, Sailor, Kogb, & Baer, 1976; Swetlik & Brown, 1977). Early on, interventionists sought to task-analyze communication routines into the smallest teachable segments, making it a natural fit with AAC intervention (Zangari et al., 1994). As teachers and therapists recognized the intricacies of social communication, the behavioral approach changed in focus, placing growing emphasis on the development of functional skills, which could then be generalized throughout the individual’s daily communication environments (Kopchick & Lloyd, 1976; Lorrett, 1969; Zangari et al., 1994).
Unaided and low-tech systems, such as sign language, gestures, and picture symbols, were the most commonly used AAC systems. During this time, most professionals believed that communication systems should be either unaided or aided, but not both; thus, it was rare to see a blend of unaided and aided systems (Musselwhite & St. Louis, 1988; Romski & Sevcik, 1988).

Several aided symbol systems were developed and implemented during this period, including rebus symbols, Blissymbols, and the Non-Speech Language Acquisition Program (Bryen & Joyce, 1985; Moores, 1980). Early forms of electronic communication devices, precursors to voice output, also became available. One such device was the Auto-Com, developed by the Trace Research and Development Center. The Auto-Com displayed the user’s messages on a screen or printed them on paper (Hagen, Porter, & Brink, 1973; Zangari et al., 1994). Other communication devices during this time included scanning devices, simple switches, and eye-gaze boards (Hagen et al., 1973).

However, practical issues often inhibited wide use of these devices. Many were abstract or relied heavily on the ability to read and write (Hagen et al., 1973). The fine-motor and cognitive skills required to effectively utilize such systems as Blissymbols, or the motoric requirements for typing, handwriting, and/or finger-spelling inherent in other approaches, effectively excluded many people with severe disabilities (Stremel-Campbell et al., 1977).


The 1980s saw tremendous growth in the number and variety of available communication devices, as well as significant changes in fundamental language intervention philosophies and strategies. Improvements in computer technology, including the development of better voice synthesis and improved computer graphics, led to a greater variety of user-friendly AAC devices (Beukelman & Mirenda, 1998; Zangari et al., 1994). In particular, improved speech synthesis technologies made augmentative communication services more accessible for individuals with severe disabilities (Romski & Sevcik, 1988). Voice-output devices such as the IntroTalker by Prentke-Romich and the McCaw by Zygo were graphic in nature, making them more usable by people who were unable to read or write (Zangari et al., 1994). Despite these advances in high-tech options, professional interest in unaided AAC systems remained high. Unaided and low-tech strategies remained the most frequently used methods, in part because persons with high-tech devices often used these unaided AAC strategies to supplement voice-output devices (Miller & Allaire, 1987).

Historically, the choice of communication system often was based on the belief that individuals with severe physical disabilities would benefit most from aided systems, whereas persons with severe cognitive disabilities with lesser levels of physical disability should use unaided systems. This principle changed with the recognition that the combination of aided and unaided communication systems yielded substantially enhanced communicative power. This was a milestone in language intervention philosophy (Musselwhite & St. Louis, 1988).

Teachers and therapists were concluding that the choice between an aided versus unaided system was of minor consequence compared to the importance of implementing the chosen system within natural routines that would result in functional communication (Romski & Sevcik, 1988). Language intervention efforts focused on designing multicomponent systems that reflected the practical needs of the child, based on the communication demands of his or her environment (Musselwhite & St. Louis, 1988; Zangari et al., 1994). Best practices included identification and provision of detailed educational strategies and individualized communication competencies (Musselwhite & St. Louis, 1988). It was within this framework that interventionists began successfully integrating aided and unaided communication modes (e.g., sign language combined with picture communication symbols; Romski & Sevcik, 1988).

The 1980s also witnessed growing interest in blending developmental and remedial approaches to intervention (Musselwhite & St. Louis, 1988). Historically, intervention had been based upon a developmental hierarchy. Developmental stages were task-analyzed into teachable units, with behavioral techniques used to reinforce emerging skills (Musselwhite & St. Louis, 1988). While one-on-one pull-out intervention had been seen as the strategy of first choice, more and more professionals were gradually shifting toward more naturalistic teaching strategies (Miller & Allaire, 1987), defined as “the use of naturally occurring opportunities to teach communication during the course of an individual’s daily routines” (Schepis, Reid, Behrmann, & Sutton, 1998, p. 562). Thus, although many programs continued to focus on isolated training, language intervention began to identify and target more functional communication skills, with interventions being carried out more often within natural routines and settings (Bryen & Joyce, 1985; Romski & Sevcik, 1988).

As a result of changes in available technology and in fundamental service philosophy, more persons with severe disabilities began receiving AAC services than ever before. Professionals were realizing that denying individuals access to augmentative communication systems due to lack of ability (a “readiness” philosophy) meant that many of these clients seldom worked on anything other than the development of prerequisite skills. These readiness activities were rarely functional or age-appropriate and may have actually prevented individuals from receiving the very strategies and instruction needed to develop more functional communication skills (Beukelman & Mirenda, 1998; Kangas & Lloyd, 1988; Reichle & Karlan, 1985; Romski & Sevcik, 1988). A shift in basic communication intervention strategies resulted in prerequisite skills being integrated into language intervention programs, rather than being taught prior to intervention (Kangas & Lloyd, 1988; Musselwhite & St. Louis, 1988; Romski & Sevcik, 1988).
The Contemporary Period (1991-Present)

Perhaps the greatest change in augmentative and alternative communication has been the near-universal abandonment of prerequisites for AAC services. This has occurred largely because of the lack of compelling empirical research supporting the requirement that certain cognitive prerequisites be present prior to beginning effective augmentative communication services (Kangas & Lloyd, 1988; Romski & Sevcik, 1991). This opens the door to provision of AAC services for all persons, regardless of the severity of their disabilities. As Mirenda (1993) noted, communication is not something that has to be learned. It is an inevitability because people cannot not communicate.

The primary emphasis of communication intervention has shifted to the acquisition of functional communication skills within natural environments. Although structured approaches are still utilized, best practices today emphasize functional language skills within natural daily routines and natural environments (Beukelman & Mirenda, 1998; Calculator & Jorgensen, 1991). Functional communication is “the actual use of language to achieve predetermined purposes. In order to be functional, language must influence others’ behaviors and bring about effects that are appropriate and natural in a given social context” (Calculator & Jorgensen, 1991, p. 204).

A good example of a contemporary approach to functional communication is the Picture Exchange Communication System (PECS; Bondy & Frost, 1994). The PECS program teaches learners to request and to comment by giving picture cards to a communication partner. Prerequisite skills, such as recognition of picture symbols or the ability to communicate intentionally through nonsymbolic means, are not required (Harwood, Warren, & Yoder, 2002). The effectiveness of PECS with individuals having autism (Charlop-Christy, Carpenter, Le, LeBlanc, & Kellett, 2002; Kravits, Kamps, Kemmerer, & Potucek, 2002; Liddle, 2001) has also been demonstrated with preschool children with developmental disabilities (Bock & Stoner, 2003), cortical blindness, traumatic brain injury, and encephalopathy (Judd-Wall, 2001), and adults with developmental disabilities (Beck et al., 2002).

As a result of increased inclusive services, naturalistic teaching strategies have gained greater acceptance (Reichle, 1997). Central to this approach is the teaching of functional communication skills using activities and materials that are regularly accessible and are highly reinforcing to the individual (Schepis et al., 1998). Naturalistic teaching procedures typically incorporate the following:

- instruction that is based on the child’s interest and that follows the child’s lead
- frequent models of appropriate communication within natural routines
- open, unambiguous prompting of child communication
- use of natural consequences
- ongoing interaction between the child and interventionist (Warren & Reichle, 1992).

Specific naturalistic instructional techniques include (a) milieu teaching, a naturalistic strategy that includes incidental teaching (Hart, 1985), and (b) mand-model, an approach based on requests for the child to produce a communicative behavior (e.g., Warren, McQuarter, & Rogers-Warren, 1984). Within these approaches the teacher is seen as a facilitator, altering the child’s environment in ways to promote opportunities for communication (Kuder, 2003). These interventions also rely on repeated practice, whereby children have multiple opportunities to observe and/or perform the desired skill (Kaczmarek, Hepting, & Dzubak, 1996; Kozloff & Rice, 1998).

Critical to this practice is that all communicative opportunities occur in natural environments where the child is provided with appropriate and natural cues and prompts to facilitate learning. AAC instruction is naturally embedded within the child’s daily routines to increase the likelihood that students acquire and generalize communicative skills. Ecological inventories (Brown et al., 1979) are helpful in identifying specific vocabulary that can be used to meet a student’s needs within the natural environment.

In the past, limitations in the available technologies often meant that the opportunity to use AAC systems using voice-output devices was not extended to persons with severe disabilities. Continued improvement in available technology has made access to voice output more possible for persons with severe disabilities. Within recent years, interventionists have come to a greater recognition of the advantages of voice-output communication devices for persons with severe disabilities (Mirenda, 1993; Schepis et al., 1998). Visual discrimination is not a factor in understanding or using voice-output communication aids, making them easily understood by both familiar and unfamiliar listeners (Schepis et al., 1998). Furthermore, it is simpler to initiate interaction because the listener does not have to be in near proximity or understand the function of the device. When the provision of AAC communication systems has been accompanied by appropriate instructional strategies, individuals with very significant disabilities have acquired sophisticated and functional communicative skills in a variety of areas. These include requesting desired objects, attention, or access to activities (Cipani, 1990; Hall & Sundberg, 1987; Sigafoos, Doss, & Reichle, 1989) and refusal of offered items or events (Drasgow, Halle, Ostrosky, & Harbers, 1996).

Family and Cultural Issues

In the Beginning (1950-1970)

Relatively little professional literature on language intervention from this era referred to family issues for individuals with significant communication needs. Professionals tended to dominate augmentative communication assessment or intervention, while families played more passive roles (Parette, Brotherson, & Huer, 2000). Although professionals generally acknowledged their responsibility to help parents accept an AAC device or system and train
parents in the use of the system, they often did not solicit parental input when designing a program. The parental role generally was limited to provider of information (McDonald & Schultz, 1973).

**Emergence of AAC (1971–1980)**

During the 1970s, provision of services rarely incorporated family members in the decision-making process (Musselwhite & St. Louis, 1988). The passage of the landmark legislation P.L. 94-142, in 1975, mandated increased parental involvement in program development for school-aged children with disabilities. However, for all practical purposes, consideration of family needs and the role of parents in the AAC decision-making process was limited. Parental input usually remained subordinate to that of clinicians and was often limited to providing information requested by interventionists (Solmat & Rieke, 1977).

Moores (1980) suggested that parental instincts regarding language stimulation could be detrimental, and encouraged professionals to stifle those instincts and train parents in the “correct” way to interact with their child. The prevalent belief was that professionals such as the special educator and speech pathologist should set communication priorities and design intervention programs. Once a program was in place, the teacher and therapists should also be the ones to make subsequent revisions to it (Solmat & Reike, 1977).


AAC assessment and intervention historically had centered on identifying the needs of the individual client (Parette & Marr, 1997). With the rapid growth in available technology and the simultaneous shift toward more inclusive services evidenced in the 1980s, professionals increasingly began to incorporate into their considerations the impact that the introduction of an AAC system could have upon families. Language professionals recognized that their responsibilities included not only the needs of the individual child but also those of the child’s family. The roles of the professional evolved to include greater sharing of information with parents and providing emotional support for parents of children with severe disabilities throughout the assessment/intervention process (Altheide & Livermore, 1987). Family routines and interests were given greater consideration during the assessment process. Parents were solicited for input on a variety of assessment issues (e.g., vocabulary selection; Musselwhite & St. Louis, 1988).

With changes came greater parental responsibilities. More than ever, parents were asked to keep professionals informed and to support assessment and intervention efforts. The parental role of advocate for their son or daughter gained greater acceptance throughout the professional community (Musselwhite & St. Louis, 1988). However, significant limitations in the role of parents persisted, with assessment and intervention practices still largely driven by professionals. Families were considered a vital component in the intervention process, but their role was still primarily that of providers of information. Generally speaking, teachers and therapists continued to plan intervention strategies based on vocabulary, routines, and environments that they considered to be the most meaningful to the child (Musselwhite & St. Louis, 1988).

**The Contemporary Period (1991–Present)**

Since the early 1990s, family and cultural issues have had greater prominence in the AAC process than ever before. Language interventionists understand more completely that providing an augmentative communication system affects not just the child but also the entire family (Parette et al., 2000; VanBiervliet & Parette, 1999). More specifically, while professionals understandably tend to focus on positive outcomes, there is increasing professional recognition that the introduction of AAC systems can have a negative impact on the family as well (Hourcade, Parette, & Huer, 1997).

In the excitement over the possibilities represented by an augmentative communication system, both parents and professionals may fail to recognize the potential stress this system may introduce into the home (Parette & Angelo, 1996). Use of an AAC device or system may result in disruptions of or limitations to familiar family routines or environments (Parette, Brotherson, Hourcade, & Bradley, 1996). Training often places additional stress on the family; transportation to and from therapy and training sessions can further compound this problem (Hourcade et al., 1997; Parette et al., 1996). The stress of introducing a particular AAC device into the family can result in technology abandonment, or rejection of the device and/or system (Hourcade et al., 1997).

Similarly, a variety of cultural issues can significantly affect the AAC system selection process. The explicit and implicit rules of language and communication are strongly rooted in cultural norms (Hetzroni & Harris, 1996). Culture may affect a family’s acceptance or rejection of certain communication devices and systems, or their willingness to use AAC systems in public settings (Hourcade et al., 1997).

Ongoing refinements in AAC technology have led to devices capable of being programmed in multiple languages, thus making AAC available to persons from a wide variety of cultures (Zangari et al., 1994). As a result of growing awareness of culture and family issues and greater availability of technology, contemporary assessment and intervention practices have become more culturally sensitive and family-oriented. Selection of an AAC system without substantial incorporation of cultural considerations may result in less than optimal outcomes (Hetzroni & Harris, 1996).

**The Future of AAC Services**

It has only been since the 1980s that widespread use of AAC systems has been extended to persons with severe and multiple disabilities. The range and capabilities of AAC technologies and strategies have grown impressively, particularly in
the past decade. Future directions should include the development and refinement of increasingly appropriate and user-friendly communication devices and further development of possibilities for persons with severe cognitive, sensory, and physical disabilities.

Some have suggested that professional preparation programs should be specifically targeted for improvement (Mirenda, 1993; Ratcliff & Beukelman, 1995). This might include greater hands-on experiences with AAC devices and systems. In addition, the multidisciplinary nature of AAC suggests the necessity of specific training in collaborative skills. To that end, preprofessional training might be carried out collaboratively among speech/language pathology, special education, and other professional disciplines that typically participate in AAC decision-making, and incorporate skills in collaboration with family members. Although federal legislation mandates substantial parental involvement, current practices may not always reflect the spirit of the law.

The rapidity and magnitude of the changes in the provision of AAC to individuals with severe disabilities over the past half-century, in terms of both the potentials of the technologies and fundamental professional philosophies, have been dramatic. As professionals continue to innovate and refine AAC services for persons with severe disabilities, it is useful to keep these historical perspectives in mind. As Beukelman (1995, para. 1) reminded us, we “stand continually on the shoulders of those who have gone before.”

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