Viewpoint

AAC, FC, and the ABCs: Issues and Relationships

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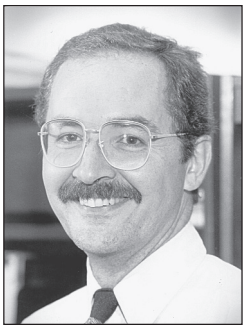

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Facilitated communication (FC) has been described as "a technique in which physical, communication, and emotional support is provided by a *facilitator* to an individual with a communication disorder (*communicator*). With assistance, the communicator points to symbols such as letters, pictures, and/or objects" (Calculator et al., 1994, p. 2). Since its introduction into the United States following the publication of "Communication Unbound: Autism and Praxis" (Biklen, 1990), FC has become a highly controversial technique in intervention programs for persons with communication disorders. The vast majority of this discussion centers on the questions of validity and efficacy, and the range of this debate is captured succinctly in the February 1995 issue of the *Journal of Speech and Hearing Research*. In four separate letters to the editor, different authors:

1. characterize FC as "a discredited technique" (Fried-Oken, Paul, & Fay, 1995, p. 200);
2. suggest central issues, questions, and methods, and basic designs for addressing validity, or authorship, questions (Duchan, 1995; Silliman, 1995; Yoder, 1995);
3. assert a fundamental belief in the validity of FC and attribute much of the polarization to epistemological differences (i.e., what constitutes acceptable evidence and how it is best interpreted) (Duchan, 1995); and
4. call for dialogue to replace dogma in the current debate (Duchan, 1995; Silliman, 1995).

It is in the spirit of dialogue that we will attempt to place FC within a larger context of augmentative and alternative communication (AAC) and highlight literacy issues related to both, AAC broadly and FC specifically. We have chosen to highlight literacy issues because the vast majority of reports on both FC practice and research has focused on messages composed using traditional orthography. We will begin by describing literacy and disability issues that lead us at present to be unsure of how to interpret the FC literature. Next, we will suggest some lessons that can be learned from literacy research that could assist in examining FC. Then, we will discuss relationships between AAC, literacy, and FC.

Is There a Middle Ground to the Debate?

As we consider what we know about FC, AAC, and literacy, we find ourselves lodged squarely in what Silliman (1992) has labeled an enigmatic perspective. In other words, we are unable to either reject all findings of FC success outright or to accept them as inherently plausible. Our indecision stems from three primary sources. First, experimental studies have clearly demonstrated that facilitators can exert an overpowering, and apparently unintentional, influence on the communications produced by dyads using FC under controlled conditions (see Green, 1994, for a review). Whereas we believe that communication is a collaborative process between speaker and listener (or writer and reader), these experimental findings to date clearly demonstrate the possibility of a heavy imbalance in this social contract (see, for example, Hudson, Melita, & Arnold, 1993; Klewe, 1994; Wheeler, Jacobson, Paglieri, & Schwartz, 1993). Narrow interpretation of these findings as applying only to conditions of a controlled experiment (Duchan, 1995) or broad interpretation that these findings demonstrate invalidity of FC (Fried-Oken et al., 1995) is to a large extent a reflection of one's research training or even worldview (see Duchan, 1995).

Second, in the literature and in our experience, individuals with developmental disabilities appear to vary widely from one another in their language, literacy, communication, and other abilities even when they share a similar diagnosis or label. Consequently, the almost uniformly negative outcomes of controlled studies and the almost uniformly positive outcomes of qualitative research trouble us. Like Prizant, Wetherby, & Rydell (1994), we favor considering the use of FC on a case-by-case basis. This calls for careful assessment and full description of an individual's oral and augmentative (including composition with traditional orthography) communication

characteristics and capabilities when determining candidacy or validating the use of FC. Hidden competencies revealed in some FC users, if genuine, may not have been hidden so much as unlooked for. The question that remains in our minds, even in cases of successful FC use, is whether the individual might not also have succeeded if provided opportunities to participate independently in literacy events through the use of assistive technologies or AAC intervention.

Third, literacy exists on a continuum. It is not something you either possess or lack. Literacy is continuously developing across each person's lifetime (see Koppenhaver, Coleman, Kalman, & Yoder, 1991). It puzzles us, then, how so many subjects of qualitative reports can produce such consistently well-developed written communication (see, for example, Biklen, 1990; Biklen & Schubert, 1991). Such performance, currently described as "unexpected" literacy, might better be characterized as "unprecedented" literacy. That is, we know of no other population or subgroup currently or historically that has been able to develop such highly advanced literacy abilities in the absence of instruction and without ever previously revealing progress toward that competency across their lifespan. Likewise, we fail to understand how subjects of controlled studies rarely produce even approximations of correct responses. It would be helpful if authors would discuss at greater length whether these low-level responses might be attributed to the nature of their subjects, the types of testing or scoring instruments and procedures used, or other factors.

Resolving the Indecision

Literacy research involving nondisabled individuals suggests to us two directions that could help resolve some of the questions of FC candidacy, validity, and efficacy. First, breakthroughs in understanding successes or difficulties in literacy learning have often resulted from thorough descriptions of student characteristics or behaviors (e.g., Clay, 1975; Read, 1971), home or school environments (e.g., Durkin, 1978–1979), or adult-child interactions (e.g., Ninio & Bruner, 1978). For example, educators and researchers interpreted the nonconventional spellings of preschoolers simply as mistakes until Charles Read's (1971) thorough descriptions revealed the systematic nature of these "misspellings." Perhaps, too, the hidden competencies suddenly and suprisingly revealed through FC (i.e., a "literate/illiterate" dichotomy if the communicator uses traditional orthography) in the FC literature would appear more as a continuum if the literacy capabilities of subjects were more thoroughly described. Fuller descriptions of subjects' literacy and general communication abilities would contribute greatly to interpreting observed performances in research studies and assist in ruling out "trivial explanations" (Yoder, 1995, p. 203) of FC success.

Second, a hallmark of literacy assessment research is variability in individual performance over time, depending on tasks, texts, and contexts. For example, although some individuals perform similarly over time and in all contexts, most perform differently in different contexts (Johnston, 1984). It is possible, then, that we do not get a full picture of a person's communication (i.e., oral, written, or facilitated) capabilities if we test them only on one type of task, or if we test them on many different types of tasks but only on a single occasion, or if we test them over time but only on one or a few tasks. Broader assessment would provide information necessary to understanding the learner, or FC candidate, and enable clinicians and researchers to create more responsive tasks and environments.

Literacy and AAC Relationships

The potential contributions of literacy to communication competence in persons who use AAC have been increasingly recognized of late. In 1992, literacy figured prominently in the presentations before the National Institute on Disability and Rehabilitation Research Consensus Panel and in the subsequent publication of the findings (Consensus Statement, 1992). In 1992 also, the Center for Literacy and Disability Studies began offering an annual summer seminar on literacy and AAC. The following year, the U.S. Department of Education issued its first invitational priority for proposals to study the relationship of literacy and AAC.

This beginning work suggests that integrating literacy instruction into AAC intervention and assessment practices would offer the following benefits:

1. increased ability to employ AAC strategies and techniques, such as initial letter cueing, word prediction, logical letter coding (Koppenhaver et al., 1991; McNaughton & Drynan, 1990);
2. increased vocabulary access through spelling and word recognition (Blackstone & Cassatt-James, 1988; Sienkiewicz-Mercer & Kaplan, 1989);
3. increased learning opportunity and motivation to learn when AAC systems are used within the context of literacy events (Staples, Erickson, & Koppenhaver, 1993; Steelman et al., 1992–1993);

4. increased opportunity for fuller participation and success in mainstream educational, vocational, and leisure environments (Koppenhaver, Staples, Erickson, Sauer, & Yoder, 1993; Koppenhaver & Yoder, 1992; Rush, 1986);
5. enriched and broadened vocabulary and knowledge of the world through hearing, reading, and writing texts (Norris & Damico, 1990; van Kleeck, 1990); and
6. enhanced receptive and expressive syntax through the repeated experiences of processing and constructing connected text (Applebee, Langer, & Mullis, 1987; Norris & Damico, 1990).

Research suggests that in cases where literacy is incorporated into daily routines and intervention programs, many individuals with severe disabilities make good progress in learning to read and write (Koppenhaver, Pierce, Steelman, & Yoder, 1994). Butler (1979) reports the case of Cushla, who was born with severe speech, physical, sensory, and health impairments. Her parents began reading to her regularly when she was less than 3 months old because they discovered it soothed her frequent and lengthy periods of distress. Repeated developmental testing in her preschool years consistently identified delays across all categories tested except language development, particularly written language awareness and understanding.

Children with severe speech and physical impairments demonstrate a range of desired behaviors as a result of the inclusion of literacy activities in their intervention programs (e.g., Pierce & Kublin, 1993; Steelman et al., 1992–1993). Nigel, age 11, began consistently using vocalizations for communication signals after hearing a story each day in which he received a hug. After regularly being hugged as the repeated line, "How about a hug?" was read in a story, he began anticipating the line and action. He would vocalize as the line was read, but before he was hugged. Terry, age 16, began using his AAC system more consistently after being taught in an after-school program to use it to write letters to his favorite sports hero and to talk with others via an electronic bulletin board.

In essence, literacy should be viewed as an integral component of a comprehensive AAC assessment and intervention plan. The learning successes of many children and adults with severe disabilities suggest that literacy should not be withheld in lieu of developing other skills believed to be prerequisite (see Koppenhaver et al., 1991). Literacy intervention appears to benefit not only written language learning and use but, more important for AAC users, broader communication competence.

FC and AAC Relationships

FC has been characterized by some as a form of augmentative, alternative, or assistive communication (Biklen & Schubert, 1991; Cummins & Prior, 1992; Higginbotham, Sonnenmeier, & Duchan, 1993; Silliman, 1992). For purposes of this discussion, we consider FC as a type of alternative access referred to as a selection technique, "the actual physical means by which the user controls the communication system" (Beukelman & Mirenda, 1992, p. 9). That is, the individual is provided with physical, communication, and emotional support in order to point or type using a symbol set consisting of letters, pictures, or objects (Biklen & Schubert, 1991; Calculator et al., 1994; Higginbotham et al., 1993). More specifically, it may be thought of as a *dependent* selection technique, a selection technique requiring physical support (P. Mirenda, personal communication, March 3, 1994). The FC research literature to date has focused almost exclusively on use of the technique to communicate messages in traditional orthography, but a more complete AAC assessment would involve the use of other symbol sets as well.

An initial distinction between most AAC techniques and FC was the emphasis placed on the role and continuing involvement of the facilitator in the communication process, particularly the aspect of physical support. More recently, however, independence is receiving specific attention (Karp, 1993). The goal of traditional AAC intervention has always been for the communicatively competent AAC user to interact without physical prompts. Experimental studies of FC reveal the possibility that the facilitator, and not the communicator, may direct the response. This is most evident when differing stimuli are presented to each (e.g., Eberlin, McConnachie, Ibel, & Volpe, 1993; Wheeler et al., 1993). Research suggests that AAC users act on as few as 50% of available conversational opportunities in face-to-face interaction (Light, Collier, & Parnes, 1985). There is a very real risk that without greater attention to independent communication, FC could create learned helpless communicators. Goals of independent communication and environments rich in communication opportunities must be high priorities of interventionists, whether they employ FC or not.

Another departure between FC and AAC practice is that many nonspeaking individuals

with autism and other disabilities are not being considered for a range of AAC systems, or, if they are currently using one, are being taken off it because parents or practitioners believe that FC is better than AAC. AAC and FC should not be viewed as mutually exclusive; FC is but one of many possible AAC interventions. It should be considered for its efficacy in leading the individual to independent and more interactive use of a symbol set to produce clear, independent, and interactive communication.

The most effective means to help clients become independent communicators is an issue common to AAC and applicable to FC. There is no single answer to such a question, because all AAC users have individual needs and solutions to the communication barriers they encounter. However, the more successful and independent that individuals become in initiating and responding via their AAC device, and the less dependent they are on prompts from the facilitator in communicating, the greater our confidence will be in determining authorship.

In summary, individuals currently being facilitated are not able to meet their communication needs through traditional means. They are, therefore, candidates for AAC assessment and intervention. Persons currently being facilitated to communicate would derive benefit from the use of multimodalities (e.g., gestures, vocalizations), AAC systems (i.e., a blend of low- and high-technology approaches), and individualized, multidisciplinary assessment and treatment. These individuals, like other candidates for AAC, can become more independent and competent communicators when offered the language redundancy and clarity of a systems approach that meets varied individual communication needs with a variety of communication partners in a variety of communication settings.

FC and Literacy Relationships

We believe that a greater understanding of literacy learning in nondisabled children and in other populations of individuals with developmental disabilities would strengthen current investigations. Although the database is not large, studies of children with a range of developmental disabilities suggest that they learn in much the same way as nondisabled individuals (e.g., Butler, 1979; Raver & Dwyer, 1986; Rousseau, Krantz, Poulson, Kitson, & McClannahan, 1994), although their disabilities can represent substantial barriers and their living and learning environments are often relatively barren of literacy materials and experiences (e.g., Koppenhaver, 1991; Coleman, 1991). In this section, we will elaborate on three issues in particular: developmental spelling, theoretical perspectives on literacy acquisition, and candidacy questions.

Developmental Spelling

One aspect of FC that requires far more intensive analysis than has been conducted to date is that of the spelling patterns exhibited in the written messages. Inexperienced writers are less likely than more advanced writers to adhere to the conventions that make written communication successful. For example, 8-year-old Jeff, who has a primary diagnosis of autism, wrote the following:

> *boosgetredforshos weoepndoop the sonw isfaiii*

It says, "The boys get ready for school. He opened the door. The snow is falling." We know what it says because we had a picture prompt for reference, and because Jeff, who is able to speak, told us what he wrote. Jeff idiosyncratically grouped the letters as five words because he does not yet understand fully the concept of a word. Although he does not yet spell conventionally, it is clear that he has developed some rudimentary understanding of letter-sound correspondence. In general, he logically represents the initial sound in each word. He is less consistent on medial and final sounds, which makes his text difficult to interpret without his own reading of it.

Such texts are the rule and not the exception among developing writers and would be expected in the early writings of individuals being facilitated. When such messages are composed by nonspeaking individuals, independently or via facilitation, they may be dismissed as lacking meaning. The critical difference for Jeff and other speaking children is that they can read aloud to their communication partners what has been written. In essence, then, communication partners, whether clinicians or researchers, who are working with individuals with disabilities must know a great deal about developmental spelling patterns, overall emergent literacy abilities, and personal life experiences. Interpretation of written communications via FC or more independent methods is otherwise nearly impossible. Equally important, if FC is employed, the communication partner must be willing to use multiple symbol sets in search of purposeful communication. A child who cannot spell conventionally, for example, may be able to sequence pictures or select objects in order to communicate a need, share an idea, or clarify a seeming jumble of letters. Useful entries into the literature on developmental spelling would include the research of Ehri (1987) or Sulzby

(1985) and the intervention suggestions of Gentry (1987) or Sulzby, Teale, & Kamberelis (1989).

Theories of Emergent Literacy

One puzzling question in the study of FC is how individuals with autism and other disabilities learned to read and write in the relative absence of opportunity and expectation. High literacy levels in the absence of instruction *and* without demonstrations of growing competence are unprecedented. That is not to say that young children have not come to school already knowing how to read, but typically they have come from environments rich in print, high in expectations, full of varied models of literacy use, and immersed in social interactions around print use. Few, if any, of these elements have been apparent in the experiences of FC communicators, although the literature is generally sparse in its descriptions of such background information.

There are three major theoretical perspectives on the emergence of literacy: innate predisposition, social construction, and active construction (Sulzby & Teale, 1991). The innate predisposition theory suggests that learners are somehow genetically preprogrammed to become literate and that the family or interventionist only needs to provide an environment rich in literacy materials and experiences. Essentially, this perspective has been taken by those suggesting hyperlexia and hypergraphia (i.e., literacy skills in excess of presumed intellectual ability) as an explanation of FC success (Biklen, Morton, Gold, Berrigan, & Swaminathan, 1992). Likewise, this is largely the perspective taken by those who argue that literacy for those with autism and other developmental disabilities is "caught not taught" (Crossley & Remington-Gurney, 1992, p. 36). The innate predisposition theory might explain the successes of a few individuals, but it seems unlikely that a population as individually variant as individuals with autism and other developmental disabilities would be uniformly predisposed either to succeed or fail in literacy learning and use.

The second principal theory is drawn from the work of Vygotsky (1978) and suggests that literacy emerges in developing learners through social interaction with literate individuals as they carry out personally meaningful literacy experiences. Literate adults or literate peers support the individual's engagement, understanding, activity, and increasingly independent performance in literacy events. We believe that this theory has the least explanatory power in the case of most individuals experiencing success with FC. The research literature suggests that such individuals have not been highly communicative prior to the introduction of FC, often have carried labels of *severe cognitive impairment*, and have been difficult to understand for more than a few basic wants or needs. Again, while such a theory might help explain the success of a few individuals with FC, it seems unlikely that most individuals with autism have experienced the high levels of interaction and support in personally meaningful, literacy-rich experiences that this theory purports are requisite. We would not be discussing "unexpected literacy" if the case were otherwise.

The third major theory argues that an individual actively constructs an understanding of literacy through experience. Here there is less an emphasis on social interaction as in the second theory than on active construction by the individual. This theory emphasizes qualitative differences in performance at various stages of development. Reviews of the literature (e.g., Marvin & Mirenda, 1993, 1994), observations in classrooms (e.g., Staples et al., 1993), and interviews with families suggest a scarcity of literacy-rich environments for most individuals with disabilities. In fact, teachers and administrators in many programs around the United States have repeatedly and freely admitted to us that they do not provide what they view as adequate literacy instruction or experience to their students with autism or other developmental disabilities. On the other hand, it is not possible at present to quantify what constitutes adequate or sufficient literacy experience. Consequently, particularly for individuals who demonstrate an interest in print, this theory holds some promise for explaining how fairly sophisticated literacy abilities may be acquired in the absence of instruction and without demonstrating that competence to others before implementation of FC.

In sum, existing theories of literacy acquisition might explain the success of some individual cases, but none of them is consistent with what we know about the general characteristics, behaviors, and home and school environments of most individuals with autism or other disabilities. Given how little we know about what constitutes optimal or minimal literacy environments or experiences, the active construction theory is probably the most plausible explanation if FC is indeed validly employed by a dyad. Print is nearly omnipresent in developed countries, and active construction is an internal process that would be difficult to observe in natural environments. That is, it is conceivable that an individual with disabilities could attend to and learn from print in the environment without parents or professionals being fully aware of it. Duchan (1993) has described this phenomenon as learning

from the sideline. It is unusual, however, that there is so little reported variation in developmental writing patterns (e.g., phonetic spelling) in the FC literature. Whether this is a characteristic of the research subjects or the research studies remains to be clarified.

Candidacy Issues

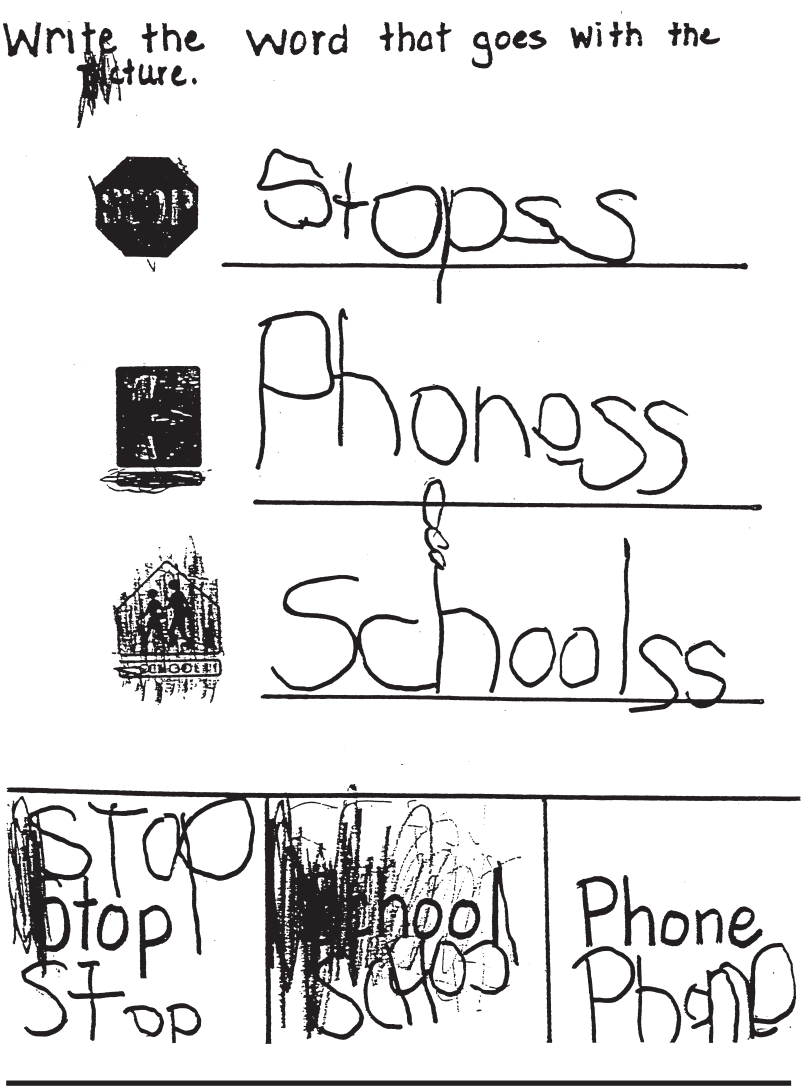
Which characteristics make an individual a candidate for FC intervention? We have been told that there are school systems and programs in many locations across the country where FC has been introduced to all students with autism. This made little sense to us initially, given individual differences in persons with autism or other disabilities. It makes even less sense to us now following the experiences of one of our staff in a summer school class for children with autism. The staff member, an experienced teacher of children with developmental disabilities, was asked to be a substitute teacher during a 6-week summer session in a self-contained classroom for seven children with autism, ages 7–11 years.

Without employing FC with any of the students, the teacher was able to achieve "unexpected literacy" with six of seven students *and* unexpected amounts of functional spoken language in three of four students considered by previous teachers to be "essentially nonverbal" (i.e., they used little speech in their interactions with others during the instructional day). The literacy was not unexpected for its remarkable syntax or the depth of meaning. It was unexpected in that it enabled the students to demonstrate competencies previously believed to be beyond their tested cognitive and linguistic capabilities. For example, some of the students generated short texts in their own words in response to picture prompts, although their classroom writing opportunities to that point had consisted solely of copying tasks. Several of the students were considered severely cognitively impaired and illiterate. Literacy had played a minimal role in the curriculum for six children. The seventh student was known to be literate and received academic instruction in the mainstream. His performance was not unexpected. We will briefly describe some aspects of the literacy performance of a few of these students, because we believe they provide a window to the written-language-learning potential in all individuals with disabilities.

Nathan is an 8-year-old boy who had not entered formal schooling until his family moved to the United States from Greece the previous year. He was considered to have severe cognitive impairments and to be essentially nonspeaking except for echolalia. He evidenced aggressive but nonviolent behaviors, made motorboat noises when concentrating, and constantly engaged in rocking and other repetitive behaviors. Whenever Nathan, a usually noncommunicative child, saw the alphabet, he would say it aloud repeatedly (A, apple, B, boy, etc.). He responded similarly to calendars, and he would sing to conclusion an enormous number of children's songs whenever he heard a phrase from them.

His literacy instruction had consisted of sight word drill and copying exercises (see Figure 1) prior to the summer program. In an effort to produce a transition into more generative written communication, the teacher gave him a journal. Nathan filled the pages with text copied from the classroom environment. To reduce the likelihood of copying, she taped pictures to a piece of paper and asked him to write about them (see Figure 2). He indepen-

FIGURE 1. Sight word drill and copying exercise.



dently produced "balls" in response to a picture of a football player being tackled, "books" and "rocks" in response to a picture of a father and daughter reading in a hammock.

Johnny, a 7-year-old, was considered nonverbal, but was known to recognize a large number of words in isolation (tested in multiple-choice format) and to enjoy browsing through books. The regular staff assumed that he was not actually reading the books, because he was considered to be a beginning-level reader in his text comprehension. However, his reading comprehension had never been formally or informally assessed. One day during the summer program, the teacher presented a wordless picture book, *Will's Mammoth*, to the class. The first day she "read" the story to them. The second day, she modeled oral text generation, keeping her models to approximately three words per page. The next day, she went around the room, presenting one picture to each child, saying, "Your turn." When she got to Johnny, he said, "It looks like the elephants are eating snow." The next day, when she repeated the activity and came to him, he said, "Elephants don't eat snow." That is, this child, presumed to be nonverbal and possessing little language comprehension, generated orally a novel and related pair of statements about the pictures. After the teacher wrote on a chart all of the sentences about the pictures that the group had generated, Johnny then read it aloud verbatim.

Efforts to further assess his reading abilities during the summer session met with little success, because he refused to respond to typical assessment procedures such as reading aloud word lists or text. One day, however, Johnny entered the room repeating the dialogue from the previous night's popular television show, *Beavis and Butt-Head*. Playing an instinct, the teacher walked over to him with individual word cards from a graded word list, pointed to a word, and said, "Cool, Beavis. What does this say?"

Johnny responded, "House, Butt-Head."

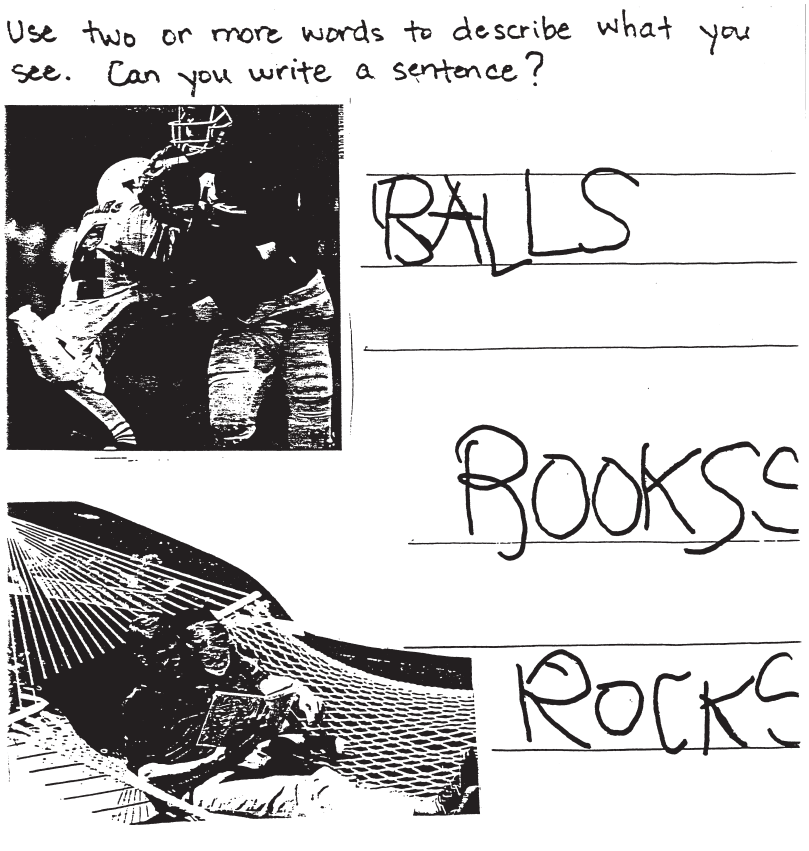
The teacher continued down the list. "Cool, Beavis. What does this say?"

"Mother, Butt-Head."

The dialogue continued until Johnny had demonstrated word identification skills at the fourth-grade level. Unable to get him to attend to or read connected text, the teacher cut it up and stapled one sentence to a page. Johnny then read it. Johnny proved to be capable of reading text with comprehension at a fourth-grade level after the teacher also manipulated the question format in two ways: (a) writing the questions one to a page with multiple-choice answers that Johnny would point to, and (b) providing plausible and implausible answers to open-ended questions and having Johnny indicate which made more sense.

Kelly was considered too "low functioning" by previous teachers for literacy. He regularly bit or pinched others and required physical prompting to complete most tasks and to follow the daily routine. His high-pitched shrieks punctuated the day, and he regularly flicked his fingers in front of his eyes. He had spent many classroom hours doing activities like sorting silverware one utensil at a time and transferring objects from one location to another. One day, the teacher presented him with an alphabet puzzle he had never previously attempted. With all the letters removed, the teacher handed him one letter at a time at random, saying, "Here's the [B]. Where's the [B] go?" Without apparent visual attention to either the puzzle or the puzzle pieces, Kelly assembled it without error. He then was provided daily exposure during calendar activities to words (written on cards) for the first time in his schooling. By the fifth week of class, when provided two printed words, he could choose correctly all the days of the week, months of the year, peers' and his own name. That is, he had developed a rudimentary base of written

FIGURE 2. Sight word drill and copying exercise modified to become a more generative writing activity.

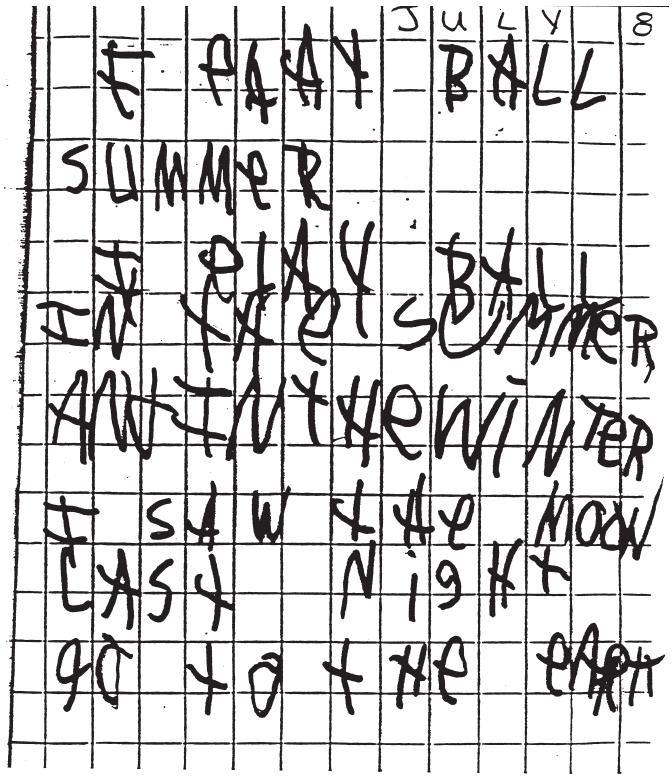


sight words in the context of daily use.

Journal writing activities were a daily event, and every child participated in some fashion, often only for a few seconds or minutes, since they had never previously had the opportunity to write, draw, or scribble about something of personal interest. Some only scribbled, some made letter-like markings. Some wrote their names or copied environmental print. Allan, an 11-year-old, wrote text willingly at times but became violent in his refusals at other times. After seeing the moon low on the horizon one evening, he wrote in class (see Figure 3), "I play ball summer. I play ball in the summer and in the winter. I saw the moon last night go to the earth."

The demonstrations of emergent and conventional written language competence by these students might be more accurately characterized as "hidden" or "suppressed" rather than "unexpected." Given a view of literacy as a lifelong learning process, it should come as no surprise that these students, when given support, were able to use print functionally in their classroom environment. Some were able to write their names, others to independently use word cards to describe the weather. Some were able to scribble or draw, others to write about personal experiences. All were able to use print to accomplish classroom tasks after literacy had been integrated more fully into their daily classroom experience.

FIGURE 3. Allan's written language sample.



The experiences in this classroom point out the following issues. First, in every case, the written language capabilities of these students had been insufficiently and inaccurately assessed. Second, students with cognitive impairments were met with low expectations and consequently few and impoverished literacy learning opportunities. Third, these students highlight how important individual and flexible approaches are to teaching and assessment, if practitioners are to gather information that truly reflects the students' capabilities. Finally, these students force us again to consider the FC candidacy question. This teacher was able to increase literacy abilities and use without FC intervention in all seven of these students with a primary diagnosis of autism.

We are left to wonder how representative this summer class is of other children with autism. Do teachers of children with autism in general hold low expectations for literacy learning and use in their students, and do they act on those beliefs by minimizing literacy in the curriculum? Are the literacy capabilities of children with autism so poorly appreciated elsewhere? Are other teachers stymied by their inability to tap literacy abilities they believe their students to possess? Are practitioners and parents too quickly attempting FC when the broader underlying issues might be a lack of appropriate literacy materials, supportive learning contexts, available communication technology (e.g., a pencil or an augmentative communication device), or opportunities to communicate about personally meaningful experiences?

Final Thoughts

We have attempted in this article to suggest that information from two fields, augmentative communication and literacy, should be incorporated more fully in the study and clinical practice of FC. We have attempted not to take sides in this debate because we believe the issues we raise are relevant to both controlled and qualitative investigations as well as clinical practice. These issues include the following. First, literacy should be viewed as continuously developing, not as dichotomous. It is consequently important to describe thoroughly an individual's written communication abilities. Second, individual literacy performance is variable and must be examined across task, text, and context. Third, FC is an AAC technique, and literacy is an integral component of AAC intervention and assessment. FC, therefore, should be considered within a broader AAC intervention plan, and literacy concerns should be taken into account.

These literacy concerns include considering individual developmental spelling patterns, gaining familiarity with emergent literacy learning theories, and investigating additional forms of support beyond FC to assist written communication development.

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