Empowering Nonvocal Populations: An Emerging Concept

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Although significant progress has been made over the past two decades in addressing the needs of individuals who are nonvocal, several areas still require the attention of the practicing clinician. One such area, the importance of empowerment as an instructional concept and practical objective, is described in this article. A general definition of empowerment and how it has been applied across several disciplines is provided. Discussion then centers on the impact of empowerment (or its absence) on individuals who are nonvocal and how this concept can be effectively applied to service delivery when addressing issues of augmentative and alternative communication.

Have you ever listened to the way people interact with Melvin? They say the most obvious things and they do it in the strangest way. It's really not conversation... it's like... providing a running dialogue on what both Melvin and those people can see. When they're talking, they treat him not only as spastic, they act like he's a moron and blind as well. I hear it and Melvin does too. It would hurt my feelings if they treated me that way... what does it do for him?

A young adult observer of an AAC user

Approximately 1,200,000 individuals in the United States, because of accident or illness, cannot meet their communicative and interactive needs through standard modes of communication (Yoder, 1980). These individuals are referred to as nonvocal, and an entire subdiscipline of rehabilitation has arisen to address their needs. Crossing numerous professional fields, rehabilitative experts from disciplines like speech-language pathology, physical therapy, occupational therapy, and special education have focused on providing service delivery to the nonvocal population. This rehabilitative thrust has included the development of communication boards and sophisticated electronic communication devices, standardized and non-standardized assessment procedures, and various teaching strategies to aid the individual who is nonvocal in reestablishing communication through augmentative and alternative communication (AAC) systems. For the most part, efforts along these lines have been successful.

Beginning in the 1970s, the discipline of AAC became especially effective with the advancement of computer technology and environmental control systems. AAC professionals, computer programmers, and engineering specialists focused on providing individuals who are nonvocal with a variety of communication systems and techniques to meet their unique, individual needs. Recently, the technology has advanced rapidly, capable of providing individuals with even the most severe motoric disabilities with access to electronic voice output and computer systems. Although providing communicative access for all physical disabilities was a major accomplishment in meeting the social and psychological needs of individuals who are nonvocal, this alone was not sufficient.

It was recognized that access had to be accompanied by an adequate lexicon. That is, to use the sophisticated electronic devices most productively, individuals who are nonvocal had to have access to words, phrases, and sentences stored in the devices that allowed them to participate in active interactional dyads with the capability to say almost anything. Consequently, the focus in the field of AAC shifted from electronic access alone, to the development of sophisticated symbol systems that allowed for rapid delivery of messages. These systems also increased the capability of producing a large number of sentences or words with a relatively small number of symbols. This link between the provision for access through technology and the development of adequate vocabulary systems was essential in "arming" the nonvocal population with some of the tools necessary for effective conversational exchanges and active participation in the learning process (Brandenburg & Vanderheiden, 1988; Yoder, 1980). Still, more was needed from a rehabilitative perspective.

As evidenced by the opening quotation, other aspects of the communicative event must be addressed. To help people who are nonvocal function most effectively as communicators, the professionals working in AAC also must consider the actual interactive process. Specifically, attention must be paid to the way that discourse strategies, interactional patterns, and even intervention techniques work to influence the control that people who are nonvocal believe they do or do not have over their communicative contexts (Angelo & Goldstein, 1990; Blackstone, 1991; Calculator, 1988; Higginbotham, 1989; Light, Collier, & Parme, 1985). That is, attention must be given to how much the AAC user is empowered or disempowered by their interactions with others.
When considering the interactive process in AAC, this issue of empowerment is extremely important for the individual who is nonvocal. As noted by Damico and Armstrong (1990–1991), not only are these special populations at a disadvantage because of their intrinsic disabilities, but “they also are disabled by the opinions, attitudes and expectations that other people have about them and that they have about themselves” (p. 34). It is not enough to focus only on the access technologies and the vocabulary systems, nor is it sufficient (by itself) to conduct treatment according to a set of “interactive” criteria that are designed to teach more interplay between the AAC user and their audience. We also must work to empower the people who utilize AAC.

The intent of this article is to address this important issue of empowerment in people who are nonvocal. First, an understanding of what empowerment encompasses and how it has been discussed will be explored. After the concept of empowerment is developed in general, it will be applied to nonvocal populations needing augmentative/alternative modes of communication. Presenting these issues and offering specific suggestions on positive and responsive interactions with augmentative and alternative populations may lead to a more direct understanding of empowerment in professionals associated with individuals who are nonvocal.

DESCRIPTING EMPOWERMENT

The term empowerment may sound radical and negative, perhaps even a bit inflammatory, to the average reader. This is due primarily to the way in which the term has been used. Over the past three decades, numerous disciplines and professions have employed this term in different—and sometimes contradictory—ways. While it has been used in academic circles in a fairly consistent manner, empowerment has been used for rhetorical purposes in politics and in failed attempts to allay problems in educational and occupational settings (Ashcroft, 1987; Delpit, 1986, 1985; Fine, 1987; Kozol, 1991; Ogbu, 1978). From a practical standpoint, many of these uses of the term have given rise to the negative connotations. These connotations, however, should not prevent the serious professional from considering empowerment as a pedagogical construct. At the heart of this construct lies a very sound and basic psychological principle: an individual’s self-concept significantly influences his or her capacity to act upon events in the world (Bentler & Speckart, 1981; Goffman, 1967; Rogers, 1966).

Ashcroft (1987) discusses both the terminology and the concept of “empowerment” in an enlightening way. According to this author, to empower is to “bring into a state of ability or capacity to act” (p. 143). This state of empowerment consists of two interactive components. First, an empowered individual is one who believes in his or her ability to act, accomplish some objective, and control his or her situation. The belief is a necessary preliminary state. Second, an empowered person takes this belief and turns it into appropriate action. That is, empowerment is an action-oriented construct. Once these two components have been implemented, the individual may be considered “empowered.”

The dual quality of empowerment has been described before. As early as 1916, this quality and its importance in education was discussed by the philosopher John Dewey. He stated that “the purpose of education is to ensure the continuance of education by organizing the powers that insure growth” (p. 51). According to Dewey, the impetus for empowering students arises from the concept that learning is an internal process of discovery and inquiry that is acquired and not given by some force “out there.” Individuals must acquire the belief in their capacities and abilities as learners and then the motivation to actively learn (and become empowered). Good teachers assist or empower students along this path.

In recent years, empowerment as a concept and philosophy has received increased attention in the educational community and in applied linguistic fields. Much has been written about the importance of empowerment, the need for a theoretical framework incorporating this concept, and the desire to engage in discourse and in pedagogical strategies that result in an empowering context. Numerous researchers and teachers have stressed the need to create an empowering environment and to enhance the opportunities of traditionally disempowered individuals to become more empowered (Bauer, 1993; Creaghead, 1990; Cummins, 1989; Damico & Armstrong, 1990–1991; Duckworth, 1991; Fagan, 1989; Peters, 1971). These writings have focused on three aspects of empowerment: the two components (belief and action) and the techniques and strategies for engaging these two components.

THE IMPORTANCE OF BELIEF IN EMPOWERMENT

An individual’s own belief in his or her abilities to accomplish certain objectives and to perform in a particular way is an essential component of empowerment. This fact has been repeatedly documented in the literature (Buscaglia, 1978; Feuerstein, Rand, & Ryzders, 1988; Flores, Cousin, & Diaz, 1991; Rogers, 1969). When individuals believe in themselves and their abilities, they are “primed” to turn these beliefs into action. They take a greater interest in their environments and are more active both as learners and as participants in various contexts. These empowered individuals are more responsible for their actions, are frequently in control of the situations within which they operate, and typically engage in proactive problem solving.

The absence of belief in one’s own abilities is also relevant. Reduced belief in oneself gives rise to an individual who is disempowered. This individual is less apt to react and interact in his or her own best interests, and, when disempowered individuals do act, they frequently settle for performances or achievements below their potential. Disempowered individuals typically do not believe that they can bring about positive or desirable change. They also come to view themselves as victims with little or no control over their situations (Damico & Damico, 1993a; Goffman, 1963).
The importance of belief and its impact on empowerment has been stressed throughout the pedagogical literature. From the classic study of self-image in a regular classroom context (Peters, 1971) to the problems faced by students from diverse backgrounds (Kozol, 1991; Trueba, 1983), self-esteem and belief in one's own abilities to accomplish learning objectives are shown to play the pivotal role in academic success. For example, Mercer (1973) has demonstrated how reduced belief affects students labeled "learning disabled" or "mentally retarded." Educators also have described the characteristics of "learned helplessness" often prevalent in special education students who have poor self-concepts and little belief in their abilities (Beers & Beers, 1980; Cruickshank, 1986; Mehan, Hertwick, & Meihls, 1986). Clearly, in order to become empowered, individuals must possess or acquire a strong sense of their capabilities to create positive change or take initiative in their lives.

NECESSITY FOR ACTION IN EMPOWERMENT

While empowerment as an action-oriented concept has been advocated by many writers and educators, none has implemented this concept as forcibly and effectively as Paulo Freire (1968). For over three decades, this Brazilian educator championed an action-oriented approach to empowerment through literacy as a means of achieving liberation from socioeconomic oppression. Taking an interpersonal stance, Freire recognized that helping people overcome desperate socioeconomic conditions depended on getting them to act on the belief that they had some control over their societal destiny. By taking this belief in potential control and turning it into action by helping these people learn to read, Freire enticed numerous individuals into a very dynamic self-empowerment. Empowerment through literacy became the medium for decision making and action, and it was used as an escape from the "passive adaptation to an objective reality" (p. 66).

The literacy campaigns organized by Freire and his followers in Third-World countries have been successful, both pedagogically and politically, primarily because of Freire's insistence on the concept of empowerment as the primary motivational factor for the individual learner. This action-oriented approach powerfully demonstrates the need for active involvement of the "targeted" individuals to achieve empowerment.

IMPLEMENTING EMPOWERMENT

As the interest in empowerment has increased, a number of researchers and educators have devoted attention to this pedagogically important issue. Research has been conducted demonstrating the impact of empowerment, and numerous suggestions have been made regarding this issue in the classroom and in clinical practice (Carrasquillo & Hedley, 1993; Cummins, 1989; Damico & Armstrong, 1990–1991; Duckworth, 1991; Feuerstein, Rand, & Rynners, 1988; Kwiat, 1988; Lovitt, 1991; Mercer, 1973; Nelson, 1990; Sinclair & Glory, 1987). Consequently, educators have been encouraged to implement empowering teaching methods and strategies. Several of these suggestions warrant discussion.

Emphasizing Meaning and Relevance

Several methods of empowering students involve a focus on the meaningfulness and the relevance of what students are doing and why they are doing it. As discussed by Freire (1968), Oller (1993), and many others (e.g., Cummins, 1989; Wells, 1986), individuals are empowered as learners when they can make sense of what they are learning and when they recognize how this learning will benefit them in the future. Consequently, a number of empowerment strategies have focused on increasing the meaningfulness and relevance of classroom and clinical activities.

Fagan (1989), for example, stresses the empowering or disabling impact of learning to read. Depending on how a teacher approaches this task, literacy may initially assist children in making sense of the world, or the tasks may confound and confuse them. As described by Fagan, many children come to school with a mastery of print as readers and meaning-makers in their environments. This mastery is the result of preschool children's equating meaning in their world with the print they encounter. In the process of meaning making, they use environmental cues from signs, notes, slogans, and many other contextual features to give meaning to print (e.g., Goodman, 1984; Laminack, 1990; Oller, 1983). If teachers approach literacy as a less meaningful task by placing an emphasis on isolated letter/sound relationships and tedious drills and worksheets that have little relevance to the students and their environments, however, the children may find that their confidently controlled reading prowess is lost and that they are unable to derive meaning from the tasks. In these situations, many children initially are disempowered and may avoid the reading process.

Researchers interested in literacy acquisition emphasize that educators should understand how reading and writing contribute to the lives of children. Further, they suggest that the educators provide literacy experiences that are familiar and meaningful to the children they teach. Additionally, the researchers conclude that teachers themselves must feel empowered as well as knowledgeable about effective ways of promoting reading and writing development without relying on a set of cookbook, inflexible curriculum materials (Calkins, 1983; Fagan, 1989; Freppon & Dahl, 1991; Goodman, 1984). In literacy education, then, empowerment has been effectively implemented as a practical concept to address the motivation of the learners and the interactional strategies of the teachers. Indeed, the entire "whole language" movement is primarily predicated on this concept (Goodman, 1989; Norris & Damico, 1990).

The focus on relevance and meaning also has been advocated outside of the literacy area. Duckworth (1991), for
example, has structured a very persuasive argument about the need to make educational activities contextualized and meaningful, even if this requires increasing the “complexity” of the material. While some of her examples are more relevant to high school education and teacher training, her points regarding the negative impact of decontextualization and the advantage of keeping educational material and activities complex are very instructive for an empowerment philosophy.

In bilingual education, the work of many educators and researchers reflects this same sense of relevance and meaningfulness. For example, a number of excellent teaching techniques and strategies are included in a teaching collection by Oller and Richard-Amato (1983), and all of these strategies are linked by this common theme of meaningfulness and relevance. Additionally, Cummins (1989) has advocated a four-component strategy for empowering minority students in the mainstream educational context. His suggestions to (a) incorporate the students’ languages and cultures into the educational context, (b) encourage minority community participation in the educational process, (c) increase active instructional activities, and (d) establish more relevant and realistic assessment processes, are all intended to make the educational experiences of the minority student more relevant and meaningful.

In speech-language pathology, several researchers and clinicians also have advanced the importance of meaning and contextual embeddedness in clinical situations by utilizing the concept of scripts (e.g., meaningful representations of recurring or previously experienced events). Duchan and her colleagues (1991; Goodman, Duchan, & Sonnenmeier, 1994), for example, have discussed the development of scriptal knowledge and its relevance to meaningful intervention, and several clinicians have provided detailed sets of suggestions for working on scriptal knowledge in educational and clinical settings (Creaghead, 1990; Sonnenmeier, 1994). Similarly, the recent work of Nelson (1990), Brinton and Fujiki (1989, 1994), Damico (1992), and Norris and Hoffman (1993) regarding the need to engage in meaningful intervention activities embedded in the classroom context or in actual conversational settings are also in keeping with this focus on meaning and contextualization to achieve relevance and an empowering clinical paradigm.

**Focusing on the Interactional Strategies**

Other attempts to empower students have focused on the actual interactions used in educational and clinical contexts. Researchers like Goffman (1967), Kovarsky (1990), and Ulichny and Watson-Gegeo (1989) have demonstrated that a number of interactive styles and discourse strategies can result in the empowerment or disempowerment of a student in a wide range of interactive settings. On the basis of research findings, a number of authors have suggested a set of interactive and discourse strategies that can work to empower rather than disempower students. For example, Eriks-Brophy and Crago (1993), on the basis of their research with Inuit teachers, have discussed a number of interactive strategies that may be employed in some contexts to maintain or sustain one’s self-esteem, while Mahoney, Fors, and Wood (1990) have suggested several strategies that will assist mothers in creating empowering learning environments for their children when they interact with them.

Feuerstein, Rand, and Rynedrs (1988) have focused especially on the interactive dyad as an opportunity to actively engage an individual in meaning construction. Through an elaborate set of interactive strategies, these researchers enable the learner to work at an appropriate level of comprehensibility and to feel positive about their abilities to function as an active learner. Similar strategies also are advocated by Silliman and Wilkinson (1991) and by Norris and Hoffman (1993).

Once the concept of empowerment is understood and its influence in various fields of education is realized, it is hoped that this concept and its practical implications also will be utilized when dealing with individuals who are nonvocal.

**EMPOWERMENT IN NONVOCAL POPULATIONS**

Given the attention that has been placed on empowerment as a practical concept in other pedagogical fields, it is surprising that so little has been discussed regarding empowerment in nonvocal populations. While Warrick (1988) and others (Creech, 1981; Kraat, 1985; Viggiano, 1981) have suggested frameworks through which consultants may examine the sociocommunicative influence of disablism in the severely speech impaired, most of the attention has been placed elsewhere. The typical disempowering situations that individuals who are nonvocal may face daily—situations like the one described in the opening quotation of this article—have been addressed infrequently. Professionals in the field of AAC often remain focused on the technological and vocabulary concerns surrounding AAC systems to the exclusion of how interactions and intervention practices are empowering or disabling their clients. Consequently, there remains a lack of awareness and paucity of documentation concerning empowering and disempowering aspects of nonvocal/speaker conversational dyads and ways in which conditions may be changed to bring about desired results.

The remainder of this article will provide a discussion of the variables that affect empowerment in the AAC user and a description of specific strategies that may be employed to empower or “minimize” disabling conditions when working with this population.

**VARIABLES AFFECTING EMPOWERMENT IN INDIVIDUALS WHO ARE NONVOCAL**

Variables that affect empowerment of individuals who are nonvocal include those related to productivity or effec-
tiveness of the augmentative system; the interactive usage patterns between augmented and able-bodied individuals; the reactions and interactions of the AAC user, parents, teachers, and society as a whole; and pedagogical variables and issues within the classroom and clinical context.

Variables Related to Productivity of the System

In order to function as a successful and empowered communicator, the person who is nonvocal must have an augmentative system (communicative mode or device) that enables him or her to meet the objectives of the desired communicative interaction. That is, the various aspects of the system must mesh together in such a way that the desired goals can be accomplished. These collective aspects or dimensions of the system may be referred to as the productivity of the system, and they include a wide range of factors. For example, the dimensions of productivity include the system's ability to meet the positioning needs of the user (e.g., how well the system works when the individual is in a prone position, how it works in conjunction with electronic wheelchair controls) and the cognitive, linguistic, and interactive needs of the projected listener(s) (e.g., whether the system can be used with people who are mentally impaired, illiterate, or hard of hearing). It also involves the intelligibility of the system, its projection characteristics (i.e., ability to communicate from a distance), the openness of the system (i.e., ability to express any thought), its speed (or rate of communication), its ability to be modified to meet the changing needs of the user, and the ability of the system to be flexible enough to enable the user to employ idiosyncratic strategies during interaction (Damico, 1993; Damico & Damico, 1990).

If any of these productivity characteristics are inappropriate or ineffective, typically there is an impact on the overall effectiveness of the AAC system and, consequently, on the ability of the individual who is nonvocal to successfully interact with others. For example, if a person who is nonvocal has access only to a graphic system and must interact with a nonreader, the communicative process is abruptly halted. Similarly, a person who is nonvocal who enters a very noisy environment with an AAC device that cannot be heard over the noise also is faced with a loss of communicative ability and, perhaps, a reduction in his or her self-image as an independent interactant in this setting. These situations typically result in a form of disempowerment because the nonvocal individuals are frequently less able and less eager to interact if there is a productivity problem.

Understandably, the inability to communicate successfully because of productivity factors leads to frustration on the part of the AAC user and may reduce his or her attempts to communicate further. Frequent observation in academic and social settings indicates reduced interactions by both nonvocal children and adults after negative productivity experiences. In a recent study, for example, Damico and Damico (1990) observed a significant reduction of interactions by a capable adult who was nonvocal when the noticeable output component of the AAC device violated her desire for anonymity.

Variables Related to Interactive Usage Patterns

Studies examining the communicative interactions between AAC users and speaking individuals always have noted differences between these interactive dyads and the interactive dyads of nonimpaired speakers (Light, Collier, & Parnes, 1985; Harris, 1982). There are a number of reasons for these differences. First, it is obvious that some of the interactive differences are due to the physical limitations and neurological impairments exhibited by the people who are nonvocal. Often these limitations result in intelligibility problems, motoric inefficiencies, and linguistic/cognitive impairments. Second, the augmentative devices themselves often force different interactive styles and strategies. As documented by Vanderheiden (1988), Brandenburg & Vanderheiden (1988), and others (Parrier, Yorkston, Marriner, & Beukelman, 1985), the devices typically give interactive access to only a limited vocabulary, and this usually occurs at a much slower rate of message transmission than is expected or tolerated in normal speaking dyads. Finally, interactive differences arise from the way in which people who are nonvocal and impaired are treated in many everyday contexts. As discussed by Sweidel (1989), interactive roles are often based on the attitudes, values, and behaviors ascribed to them by society. Because society typically assigns a role of helplessness, powerlessness, and incompetence to individuals who are disabled (Cruickshank, 1986; Goffman, 1963), these individuals are perceived and treated differently (Calculator, 1988; Mineoka & Donnellan, 1986; Mineoka & Iacono, 1990). In discussing this problem, Warrick (1988) suggested that many individuals who are nonvocal are more challenged by these social/relational factors than by physical or cognitive inadequacies.

As a result of these differences in interactional styles and strategies, a number of adaptations are used by the people who are nonvocal and their speaking partners (Calculator & Dollaghan, 1982; Parrier, Yorkston, Marriner, & Beukelman, 1985; Light, Collier, & Parnes, 1985; Wexler, Blau, Leslie, & Dore, 1983). These adaptations involve passive responding by the person who is nonvocal (who rarely will initiate turns or topics), a reduced range of communicative functions expressed in the interactive dyad, a reduced length of response on the part of the individual who is nonvocal, and a greater reliance on the speaking partner to construct the actual message. These adaptations generally result in the speaking partner's taking more conversational turns, choosing more of the topics during interaction, asking multiple questions, and filling silent gaps with extraneous talk (Buzolich & Wiemann, 1988; Calculator & Jorgensen, 1991; Harris, 1982; Mineoka & Iacono, 1990). Although sometimes not intended, the speaking partners also may repeat questions or comments, even though the nonvocal partner has understood him or her, and they often misinterpret and or appear to interrupt before the AAC user's message is complete.

Situations in which the individual who is nonvocal is asked questions already known by the inquirer are frequent in these interactive dyads and are not typically suc-
cessful in motivating communicative interaction (Warrick, 1988). For example, a child who is nonvocal might be asked to provide the listener with his or her name and grade level when the information is already common knowledge. The question is asked not because it is relevant, but because it is on the communication board and can be easily accessed. In another instance, the teacher may feel that the child must "practice" various utterances or messages in a repetitive or drill-like manner. These drills may occur frequently, at the expense of violating sincerity constraints, and, because there is little meaning in the task, the child's response is often less than enthusiastic.

The AAC users' passivity in these interactions may be indicative of their inability to employ effective initiation strategies and/or is reflective of a disabled perception and lack of confidence in conversational interactions. One also may argue, however, that AAC users do not talk as frequently because of the physical effort required to do so. Clinically, this has been observed. AAC users may choose shorter responses or yes/no responses for the sake of intelligibility and ease of response, rather than provide responses reflecting their general knowledge and language capabilities. Whatever the reason, these interactive variables frequently result in a reduced communicative performance and/or a poorly perceived capacity to communicate, and this may result in disempowerment.

Variables Related to the Reactions of Educators and Society

A human being in a wheelchair equipped with posture and support mechanisms and who emits involuntary, exaggerated gestural and facial movements as a result of disability is immediately at a disadvantage when encountering able-bodied individuals. As previously discussed, these encounters typically are defined in a particular way by society and frequently lead to a "stigmatization" that can be very disempowering (Cruickshank, 1986; Goffman, 1963, 1967). Block and Yuker (1977) investigated the recognition, nature, and ability to change public attitudes toward those with disabilities. Basically, their studies documented that (a) people look upon people with disabilities as a group whose main characteristic feature is disability, not individuality; (b) the rejection of the person with disabilities is strongest initially and diminishes with repeated encounters; (c) people with discriminatory attitudes toward minority groups also show high anxiety and low self-esteem; and (d) people respond differently toward various types of physical disabilities, with the inappropriateness of this response resulting in a greater sense of rejection than that caused by the severity of the disorder.

Each of these findings may have a tangible (and negative) impact on the interactions between AAC individuals and the public in general. For example, often the person who is nonvocal is ignored by unfamiliar listeners. This is frequently due to the listeners' discomfort with the AAC user's unconventional mannerisms (Buzolic & Wiemann, 1988; Calculator & Jorgenson, 1991; Greech, 1981). Negative stereotypes also exist. These are evident when, in the presence of the AAC user, speaking individuals ask: "Can he hear?" or "Can he understand me?" Unfortunately, these reactions are not limited to nonprofessionals. Even with evidence to the contrary, some teachers equate motoric problems with cognitive deficit and (incorrectly) expect the AAC student to lack the cognitive capacity for academic learning (Cruickshank, 1986). Thus, society as a whole constructs attitudes and creates expectations aimed at persons with disabilities that ensure a history of learned inferiority in many individuals who are disabled.

Variables Related to the Reactions of the AAC User and Family

Low self-esteem, dependency, and lack of initiative on the part of AAC users indeed may result from the stigmatization discussed in the last section. Because of others' reactions, the person who is nonvocal begins to believe that he or she is unable to do things independently, so a pattern of passive behavior and learned helplessness (i.e., disempowerment) develops.

The families of individuals who are nonvocal are also at risk for disempowerment. When the nonvocal person experiences problems, the families may blame themselves. Especially when the individual is a child, feelings of anger, depression, and guilt may be experienced repeatedly as the child matures and continues to require medical and rehabilitative attention. These feelings are heightened when the family is unable to understand the child or when the child possesses an AAC system that breaks down and the family is unable to repair the problem in technology (Berry, 1987). These reactions provide some of the reasons for the families' frequently reported resistance to AAC. While it seems that parents should welcome the introduction of AAC systems, they are likely to be adamantly against augmentation, fearing that the child may be giving up on speech, that the family will not be able to use the system, or that the AAC system will further stigmatize the child.

The daily demands on parents of a child with multiple disabilities also conspire to create negative familial reactions. Family routine is actually not routine at all; it requires much more time, effort, and energy. Despite this, however, the results are often less successful, more frustrating, and more fraught with anxiety than the family anticipated. Thus, disempowerment ensues.

Pedagogical Variables Affecting Empowerment

Like bilingual education and special education programs in general, programs for individuals who are nonvocal (especially children) often are thought of as compensatory and remedial, rather than as programs designed to meet unique needs. In education, this frequently results in attempts to change the student to meet the curriculum, rather than modify the curriculum to meet the unique needs of the student. As discussed by Cummins (1989), in bilingual edu-
cation, this strategy of internalizing the problems in the student is usually less successful and is disempowering to the student.

Often, professionals fail to recognize how the nature of the tasks in the classroom might contribute to the student’s seeming lack of abilities. For example, the teachers may use traditional teaching styles that are teacher-dominated, rather than student-directed techniques that encourage active student participation. Similarly, the instructional activities chosen may be repetitive and meaningless drills or decontextualized and boring worksheets, rather than meaningful, active problem-solving activities. Even in able-bodied students, these educational approaches are problematic (Calkins, 1983; Carrasquillo & Hedley, 1993; Fagan, 1989; Oller, 1983; Wells, 1986). Students with special needs encounter even more difficulties (Damico & Damico, 1993b).

In many classrooms, aides may be assigned to the individual with disabilities, taking class notes for them and/or programming their devices with appropriate utterances, while the student with disabilities remains passive and virtually nonresponsive. This is not to say that the student is unable to learn in this manner, only that the techniques utilized do not encourage independence and active participation. Disempowerment may occur in these situations.

While a number of variables may result in disempowerment in the nonvocal population—even when these individuals are prime candidates for AAC intervention—the situation is not insurmountable. A number of techniques or strategies can be employed to empower individuals who are nonvocal.

**Techniques Designed to Empower Individuals Who Are Nonvocal**

Although the concept of empowerment is only emerging in the field of AAC, many of the techniques and suggestions used to facilitate empowerment in literacy, bilingual education, and special education may be applied. As with empowerment issues in other populations, the process involves helping the people who are nonvocal sustain or acquire belief in their own abilities to accomplish their objectives and then to help them turn these beliefs into action. For the nonvocal population, implementing these two components of empowerment requires providing them with optimal AAC systems to use during communication, providing the individuals who are nonvocal with strategies to effectively employ the AAC system in natural communicative contexts, and reinforcing the AAC users’ beliefs in their capabilities to employ the system by providing them with communicative and learning opportunities.

**Providing an Optimal AAC System**

At the outset, professionals in AAC should ensure that their clients are equipped with systems that are optimal for their individualized needs. In an ethnographic investigation of this issue, Damico and Damico (1990) were able to identify three synergistic characteristics necessary to determine an optimal system for individual AAC users. These include the productivity of the AAC mode or device, the unique perspective of the AAC user, and the stylistic preferences of the interactive partner(s).

The productivity of the system. As discussed previously, this characteristic refers to those aspects of the communication mode or device that enable it to meet the interactive needs of the AAC individual. Care should be taken to observe the potential AAC user in his or her natural contexts and to determine how his or her unique impairment and operating environments will affect the use and effectiveness of the AAC system. It is not always the case that the most technologically sophisticated and powerful AAC device will meet the individual's needs. Therefore, what is best for each individual should be considered without biases. Individualization of productivity requires individualization of needs assessment. For example, in some settings a system with strong projection is preferred (e.g., in a noisy family room), while in others a less noticeable (and less powerful) projection system is better (e.g., in a classroom setting with a stress on silent work assignments).

In another situation, a system with greater speed of message transmission may be preferred over a system that can generate a large number of novel utterances.

Frequently, a focus on the productivity of the system includes changing or adapting the augmentative communication aid so that vocabulary and signals helpful for managing interaction are accessible to the person who is nonvocal. For example, programming an attention-getting phrase such as “I need help” or assembling a call button to assist the individual in gaining the attention of others may be in order. Similarly, including programmed items, such as “Wait, I’m not finished” or “This may take a little while,” can help the person who is nonvocal manage interactions and maintain the conversational floor.

Regardless of what is needed to enhance productivity, once a needs assessment is performed, adjustments can be made. It is important, however, to recognize that these needs vary with individual AAC users. Consequently, the productivity factors and the unique ways that these factors mesh together for each AAC individual must be considered to create user-specific optimal systems.

The perspective of the AAC user. The second consideration for an optimal system requires that the AAC professional design the AAC system to meet the unique perspective of the individual who is nonvocal. The ways that individuals choose to act upon the world primarily are determined by their particular perspectives. On the basis of one’s perspective of his or her own situation and what he or she deems most important, priorities are established and strategies to fulfill these priorities are implemented. This is true whether an individual functions normally or is disabled in some way.

Too often, teachers and clinicians make assumptions regarding the best interests of their students and clients that are not in concert with the needs and desires of those students and clients (Gallagher, 1983; Kovarsky & Crago,
1990–1991; Ulichny & Watson-Gegeo, 1989). That is, the professionals use their own perspectives to determine priorities and implement strategies, rather than attempt to understand the perspectives of their clients. When this occurs with the nonvocal population, it may result in the establishment of an AAC system that is poorly matched to the needs and desires of the individual who is nonvocal. For example, Damico and Damico (1990) found that one adult AAC user was not interested in a system with powerful voice output because she saw this output system as a threat to her hopes for physical improvement. Similarly, she rejected the projection advantages of the voice output system because she felt that it made her “stand out” and she only wanted to “fit in” with others. From her perspective, then, the voice output was viewed as infringing on her hopes for improvement and re-socialization.

To be most effective, professionals should take into consideration the perspectives of the client. As with the productivity characteristic, the AAC professional can carefully observe the interactions of the individual who is nonvocal in naturalistic contexts and then obtain information from that individual regarding his or her objectives, hopes, and desires. Several effective strategies can be adapted for such a task. For example, Gallagher’s (1985) pre-assessment procedure for accounting for language usage variability, Westby’s (1990) suggestions for ethnographic interviewing, and Kovarsky’s (1992) strategies for describing important contextual features may be used to determine the perspective of the individual who is nonvocal. While the AAC professional may attempt to modify inappropriate or potentially unrealistic expectations, these desires and objectives are important to the person who is nonvocal and must be considered when designing an optimal AAC system.

The preference of the interactive partner(s). The third characteristic to consider when designing an optimal AAC system is the preference of the interactive partners. While this is not necessarily the most important consideration, it does play a role in determining the success or failure of the AAC system used by an individual who is nonvocal. Regardless of the productivity of a system or how it blends with the desires of the AAC user, if particular aspects of the system are not preferred by the important interactive partners, then the system will not be used to maximum benefit.

Both clinical experience and descriptive data (Damico & Damico, 1990) indicate that, when given a choice of intelligible communicative modes, listeners (through their interactional strategies) often dictate which particular mode is utilized. Indeed, it appears that the various communicative modes are assigned different “weights” or “priorities,” depending on the listener. For example, some interactive partners prefer familiarity and/or rapid rate of message transmission, even if it requires constant attention to the device or mode (e.g., a communication board). Others, however, find the requirement for constant attention to be a hindrance and prefer a system that places less burden on them to “synthesize” what is being said. In each of these types of situations, the interactive partners respond in a manner that shows their preferences to the AAC users. On the basis of these interactions, changes are negotiated, or the interactions become less effective. It is important, therefore, that the preferences of important interactants be considered. Again, through observation and interviews, these preferences can be determined, and either the AAC systems or the interactant preferences can be modified accordingly.

Once the AAC professionals devote careful attention to the three characteristics of productivity, perspective, and preference, there will be a much greater opportunity for the establishment of optimal AAC systems. These systems will best meet the unique needs of the individual AAC users and will better assist in the empowering of these individuals who are nonvocal.

Focusing on the Interactive Dynamics

The second major issue to address when empowering people who are nonvocal involves providing these AAC users with strategies to effectively employ their optimal AAC systems in natural communicative contexts. This requires a focus on the dynamics of AAC interaction. As with other rehabilitative fields, practicing clinicians often have neglected serious consideration of the conversational and discourse strategies that actually determine success or failure during interactive exchanges (Blackstone, 1991; Damico, 1993; Damico & Damico, 1993a; Light, 1988; Maxwell, 1993; Simmons, 1993). AAC professionals working with individuals who are nonvocal should employ two strategies to focus on interactional dynamics: they should learn more about conversational analysis and its application to AAC, and they should teach their AAC clients beneficial interactive strategies.

Conversational analysis and its role in AAC. First, professionals working with people who are nonvocal should become well informed about the research on AAC “conversation” and interaction that has been conducted over the last decade. This information will provide a greater appreciation and understanding of the complexity of interaction present in AAC/speaking dyads. Given the complexity of the process, this information is essential.

Over the past 30 years, sociologists and linguists have investigated the power of conversational and interactional strategies to “make things happen” in communication (Goffman, 1967; Gumperz, 1982; Sacks, 1969; Sacks, Scheglof, & Jefferson, 1974; Scheglof & Sacks, 1973). This powerful research emphasizes the importance of an interactional perspective involving tactical uses of language and communication over the more limited focus on language structural units alone. Particularly with individuals who are nonvocal, this research has great relevance and should be embraced by AAC clinicians.

Within the last decade, a number of researchers in AAC have investigated the conversational dimensions of the AAC/speaking dyad, and these data have resulted in a reemphasis on the strategic aspects of interaction that carry great clinical significance (Higginbotham, Mathy-Laikko, & Yoder, 1988). For example, Higginbotham (1985, 1989) has provided one of the most important applications of con-
versational analysis to the field of AAC. His work has demonstrated that the process of message formulation is "cooperative, patterned, and predictable to allow for successful production and understanding of the message" (1985, p. 39). Within this research, Higginbotham (1989) has created several descriptive analytic devices (i.e., Message Formulation Episode, Message Reformulation Episode) that effectively capture the co-constructive process of AAC interactions and that are sensitive to the give-and-take of interactional exchanges. By working within his analytic framework, clinicians can achieve a greater understanding of interactional complexity, and they can apply these units for clinical advantage.

Other researchers also have contributed important information that should be assimilated by clinicians. For example, Blau (1986) has demonstrated how interactants who are nonvocal achieve conversational control by "cuing" or soliciting the speaking partner to restate propositional items. Through pauses, eye gaze, facial expressions, and gestures, these individuals can significantly structure the interactive dyad. Buzolich and Wiemann (1988) and others (Farrier, Yorkston, Marriner, & Beukelman, 1985; Higginbotham, 1989; Light, 1988; Rauck & Higginbotham, 1991) have provided interactive data that lend further weight to the constructive and active role of the individual who is nonvocal. Some of the control mechanisms described in these data are consistent with those employed by speaking individuals, while others are unique to people who are nonvocal (Buzolich & Wiemann, 1988; Calculator & Delaney, 1986; Higginbotham, 1989; Kraat, 1990; Wexler, Blau, Leslie, & Dore, 1983). Overall, a number of recent studies indicate the importance of interactional dynamics when working with people who are nonvocal. This information is essential for empowering this group as communicators.

Teaching beneficial interactive strategies. Once AAC clinicians become aware of the complexity of the interactive process, they can better understand the need to work on interactive skills and strategies that will be beneficial to their clients. A number of strategies can be implemented to the advantage of AAC clients.

Over the past 10 years, therapeutic programs with an emphasis on interactive management strategy training have emerged (Angelo & Goldstein, 1990; Beukelman & Yorkston, 1982; Blackstone, 1991; Calculator, 1985; Dattilo & Camarata, 1991; McNaughton & Light, 1989). These strategies range from techniques to increase the interactive effectiveness of individuals using communication boards (Angelo & Goldstein, 1990; Glennon & Calculator, 1985) to the establishment of more elaborate interactive strategies in naturalistic settings (Calculator & Jorgenson, 1991; Cassatt, 1989; Light, Dattilo, English, Gutierrez, & Hartz, 1992; Reichle & Ward, 1985). Many of these techniques can be used to increase the communicative abilities of the individual who is nonvocal.

Blackstone and Cassatt-James (1988), for example, derived strategies for training various interactional skills. The techniques described included teaching partners to become facilitating agents, enhancing maximum speed and efficiency (e.g., use of telegraphic utterances, use of preprogrammed utterances), facilitating conversational re-pairs, developing conversational turn taking, initiating and establishing conversation, and expanding the variety of speech acts employed by the individuals who are nonvocal. This work provides a wide range of intervention techniques and treatment objectives.

Culp and Carlisle (1988) designed and assembled an equally effective resource guide for interaction facilitation training for children using AAC. This resource, "Partners in Augmentative Communication Training (PACT)," provides a number of interactive strategies and activities that focus on incorporating these strategies into everyday routines and conversation. Specific strategies are delineated according to whether they are behaviors typically used by the person who is nonvocal (e.g., offering information, requesting assistance, securing partner’s attention) or if they are "partner" behaviors (e.g., positioning self appropriately, providing pause time, confirming messages of the child who is nonvocal). Depending on the individual, both types of strategies may be employed to increase communicative effectiveness.

Some of these techniques have been designed for use by family and peers rather than by clinicians alone. Fox and Westling (1991), for example, have provided training strategies for parents to act as facilitators during play with their children. By taking interactive strategies typically used by the parents previous to the facilitator training, these professionals were able to increase the frequency and effectiveness of the parental interactions to achieve a therapeutic effect. Data suggest an increase in social behavior by people who are nonvocal as a result of these parental interventions. Others (Cassatt, 1989; Hunt, Alwell, & Goetz, 1991) have provided strategies for using school-age peer facilitators. These techniques hold promise for incorporating more people into the intervention framework. This should increase the naturalness of the interventions and result in more opportunities for people who are nonvocal to use their interactive skills.

Reinforcing Beliefs in Their Abilities

The third major issue to address when empowering individuals who are nonvocal is more general than the previous issues. However, it is no less important. To become empowered, individuals who are nonvocal must have the opportunity to communicate successfully and to learn in natural contexts. Given these opportunities, they will develop a greater belief in their capabilities as learners. This, of course, is a prime characteristic of empowerment.

While these opportunities can be provided in a number of ways, most can be divided into four basic strategies: employing meaningful and relevant activities, implementing positive and encouraging interactions, reducing negative perceptions and expectations, and providing family support.

Employing meaningful and client-based activities. As discussed by numerous authors in other disciplines, learners are empowered when they are permitted to be active participants in a meaningful learning process (Cummins, 1989;
Fagan, 1989; Goodman, 1989; Oller, 1983; Rogers, 1969). This is true of learners with and without disabling conditions. Likewise, to be empowered as communicators, individuals who are nonvocal must have the opportunity to be collaborative and cooperative participants in communicative interactions.

Instead of making such individuals passive recipients of intervention, clinicians and teachers should stress the integrated nature of language and learning within meaningful and naturalistic contexts. Additionally, they should create opportunities for active participation by these learners. In this way, students assume greater responsibility for themselves and are made to feel more capable and competent (Osajima, 1989). This can be accomplished in a number of ways. By modifying meaningful literacy activities (e.g., Calkins, 1983; Damico, 1992; Norris & Hoffman, 1993), focusing on curricular activities in the classroom (Nelson, 1990), and determining ways to provide more control to individuals who are nonvocal in their communicative and learning environments, these individuals will find learning and interaction more relevant and meaningful to them.

For example, people who are nonvocal who are unable to write independently should be provided with a “pen” or with access to adapted technology that will ensure them independence in note taking and in writing tasks. Teachers also should explore ways to adapt classroom tasks to meet the communicative needs of the students. Rosenthal and Rosenthal (1989) provide several suggestions for adapting the curriculum in a classroom environment to meet the needs of students with multiple disabilities. These suggestions include writing in, and providing multiple choice answers for, complex verbal tasks and using desktop easels to change the angle of books and papers.

Implementing positive and encouraging interactions. Because most people are empowered or disempowered through their interactions with others, it is important to provide direction to those who most frequently interact with individuals who are nonvocal. Teachers, caregivers, and significant others should be incorporated into the intervention process so that these individuals will recognize the importance of encouragement and the need for cooperative interaction. Specific instruction should be provided to these individuals on how to best interact in an empowering manner. For example, when speaking with people who are nonvocal, teachers and caregivers should resist the urge to enter into other conversations while the AAC user is formulating messages. They should eliminate needless repetition or rephrasing of questions when it is apparent that the AAC user has understood. They also should strive to ensure that conversational messages are relevant and do not violate sincerity constraints.

A number of effective facilitator training strategies have been reported in the AAC literature (Dattilo & Camarata, 1991; Light, Dattilo, English, Gutierrez, & Hartz, 1992; Rauck, 1991). These methods have focused on how to train the facilitators and how the facilitators should interact with people who are nonvocal. The methods range from explanation, discussion, and modeling of the various strategies, to review of videotape and clinician coaching during training sessions. Blackstone (1991) advocates training techniques that change both the interactive behaviors and the attitudes of those who communicate with people who are nonvocal.

In particular, two recent techniques have proven very effective in modifying the behaviors and the attitudes of individuals who work with children who are disabled. Johnson and Harrison (1991) have utilized facilitator self-rating to reduce the directive styles of interaction between mothers and their children who are language-impaired. These self-ratings “induce” self-change because the mothers are forced to be more reflective of their behaviors and of the impact that these behaviors may have on interactions with their children. Damico (1993) also has used a strategy that is effective in modifying both behaviors and attitudes when working with individuals who are nonvocal. She has enabled the speaking individuals to engage in role taking by having them use an AAC device in various interactive settings. Based on the data, this role-taking technique has promoted better understanding of the demands placed on the person who is nonvocal in terms of device limitations, the need for modifying interactional strategies, and interactive pacing. Both of these self-reflective techniques enable the nonimpaired individual to become more accountable for the interactive changes that must be present for empowerment to occur.

Reducing negative perceptions and expectations. As discussed previously, a number of negative perceptions and expectations regarding individuals who are nonvocal can be very disempowering. So that people who are nonvocal can have the necessary opportunities in society and a reasonable chance of success when these opportunities are presented, these perceptions and their expectations must be changed.

In dealing with the disabling perceptions of educators and society as a whole, AAC consumers and professionals have a responsibility to educate society regarding the abilities of each individual who is nonvocal. With the exception of their physical limitations, most of these individuals are like the rest of society. It is no longer acceptable to isolate these individuals or to ignore them. Recently, with the attention given to the movie My Left Foot, and with the fame of physicist Stephen Hawking, the nonvocal population has had more positive portrayals. There also has been a noticeable increase in advertising in the appearance of models who are disabled. However, more must be accomplished.

As concerned professionals, we must provide individuals who are nonvocal with more integrated activities and promote their participation in the mainstream classroom and outside the gates of the schools, thereby increasing exposure and understanding. AAC professionals also must inform others of what to expect prior to meeting individuals who are nonvocal. As noted in the research of Block and Yuker (1977), the more familiar society becomes with disabling conditions, the more appropriate the reactions and expectations of individuals within society.

With regard to the negative perceptions of nonvocal people themselves, teachers should be aware of the importance of incorporating the perspectives and “culture” of the child who is nonvocal into the curriculum. As discussed by Cummins (1989), within a bilingual context, this pro-
vides greater understanding and positive self-identity. One way to incorporate the culture is by presenting the class with materials and pictures that portray children who are nonvocal—for example, a picture of a child who is nonvo-
cal playing with adapted toys, as opposed to a boy throwing
a football (Warrick, 1988). Several publishing houses have
books and materials available that incorporate individuals
who are nonvocal into their stories (e.g., Jason and Nordic
Publishers). The Carolina Literacy Center at the University
of North Carolina is a particularly good resource on mate-
rials and research in this area.

AAC professionals and parents should be mindful of
the myriad of factors that inadvertently may contribute to
the negative perceptions of the nonvocal population and seek
to reduce these factors. For example, socially inappropriate
behaviors and a negative overall appearance frequently
are used as validations that individuals who are nonvocal
are more different than similar to the rest of society (Block
& Yuker, 1977; Goffman, 1963). Consequently, the profes-
sionals and parents should attempt to present the individ-
uals who are nonvocal in a positive light. Cleanliness and
appearance should be stressed, as well as the aesthetics of
the communication board itself. Clinicians also may guide
AAC users toward more normal-looking communication
modes, rather than gestures that require excessive, extrane-
ous movements.

The advantage of most of these suggestions is that they
frequently reduce the negative perceptions of disabilities
that society in general has and that the nonvocal individuals
themselves have. In both cases, the effect is usually to rein-
force both the positive self-image of the individuals who
are nonvocal and their roles in society.

Providing family support. The family is the most impor-
tant agent for empowerment in most cases. This is due to
the frequency of interaction and the obvious emotional at-
tachments. To assist in empowering the person who is non-
vocal, however, the family itself has to be empowered. As
previously discussed, this is not always the case. It is appro-
priate, therefore, to stress the family as an appropriate tar-
get for support and intervention (Culp, 1982; Berry,
1987). Within the rehabilitation literature, there are a num-
ber of suggestions for both empowering the families of peo-
ple with disabilities and incorporating them into the inter-
vention framework (e.g., Andrews & Andrews, 1990;
Crais, 1992; Dunst, Trivette, & Deal, 1988; Jackson &
Cooper, 1989). Providing the family with information regar-
ding AAC systems to be appropriately implemented is
generally an initial step. It is important that the family un-
derstands the operation and potential of the AAC system
and that they have some experience with its use. Being
trained in minor troubleshooting—just in case the system
exhibits problems—can be very empowering for the family.

Creating a support network, such as parent-teacher sup-
port groups or parent support groups for information shar-
ing, is another beneficial way to meet the family needs and
to create empowering attitudes. Too often the families of
individuals who are nonvocal feel that their problems and
concerns are unique. Having access to others with similar
concerns and interests can have a cathartic effect.

AAC professionals are encouraged to include the parent
as an integral member of a decision-making team regarding
the child’s communication system, curriculum, and commu-
nity and social needs. While the parent must be involved in
creating the individualized education plan for their child,
greater inclusion is recommended. Greater opportunity for
daily or weekly interactions and decision making on the
parents’ part enable them to truly participate in the educa-
tion and interventions designed for their children who are
nonvocal. Including parents in classroom activities at
school should prove to be empowering to both parent and
child. Additionally, these school-based activities can be
used as a springboard for learning activities that can be con-
tinued and encouraged at home. Without the assistance
and encouragement of the family, the empowerment of the
individual who is nonvocal is a much more difficult process.

CONCLUSION

Professionals in the field of AAC have come to realize the
difficulties of working with individuals who are nonvocal in
a world of preexisting norms, expectations, and attitudes.
In addition to the physical limitations exhibited by these
individuals, a number of social, educational, and psychologi-
cal barriers must be overcome. By incorporating an “em-
powerment strategy” into the intervention plan, this im-
portant psychosocial construct can assist in achieving the
overall objectives of remediation when working within the
nonvocal population. By employing empowering interac-
tions, attitudes, and instructional strategies, individuals
who are nonvocal can be encouraged to take charge of
themselves and to achieve all that their individual poten-
tials will allow. The result will be an implementation of
programs that potentially can reduce academic failure and
that can encourage independent, confident, and em-
powered individuals.

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