Communication needs of physically disabled nonspeaking public school students were assessed using a job analysis methodology. Based on 128 interviews with teachers, parents, therapists, and others who knew the students quite well, a questionnaire was developed on which a variety of potential messages and message topics were rated in terms of communication requirements. Responses to the questionnaires were factor analyzed, yielding 4 factors relating to interpersonal/academic content, recreational activities/special events, basic needs, and apperceptive content. The frequency with which messages were suggested during the interview phase was also reported. Implications for developing vocabularies for augmentative communication systems were discussed.

Children with impaired motor functioning who also lack the ability to speak intelligibly are often unable to communicate effectively with people in their surroundings. In cases of severe dysfunction, alternatives to speech such as writing, typing, or manual signing are generally not viable options. Youngsters in school are typically placed in special classes for the developmentally delayed and are provided with additional services, but obstacles to communication with teachers, therapists, parents, and others are difficult to overcome (Bigge & O'Donnell, 1976; Meyers, Coleman, & Morris, 1982).

Recently, increased attention has been given to approaches to facilitate nonoral communication. Among these approaches is the use of specially designed devices capable of being operated by persons with very limited motor control. Such devices can replace or augment speech and/or language functions (Coleman, Cook, & Meyers, 1980; Silverman, 1980) and are called augmentative communication systems. They may range in technological sophistication from a paper-and-pencil communication board (in which the user points to the desired symbol or message) to a complex microcomputer system (in which the user may operate a switch to move a cursor to select a message or function).

Many augmentative communication systems require an individual in the user’s environment to develop and program a vocabulary into the system. For example, a teacher or parent must paste/draw pictures or write words on a page.
before the child can point to a message or symbol to express a thought. Guidelines for vocabulary selection are currently available (e.g., Carlson, 1981; Dayan, Harper, Mallory, & Witt, 1977; Fristoe & Lloyd, 1980). Most guidelines appear to have been derived from specific case studies, common sense, and other situation specific bases. Their intent is to meet the unique communication requirements of a particular user in particular situations.

The specific vocabulary elements chosen for the augmentative communication system can strongly affect the type and quality of the communication and must therefore be as representative as possible of the child’s communication needs. As we are using the term, communication needs can be depicted by the information that the children must transmit to others regarding their health, well-being, and bodily necessities. These needs also subsume information appropriate for conversing in family, academic, and social settings.

An additional way to assess vocabulary needs of physically disabled nonspeaking children is to describe these needs quantitatively. Such an approach would focus on the general nature of these needs for a group of children rather than addressing the specific needs of a single child. To the extent that the general set of needs could serve as a basis for creating a specific vocabulary for a particular child, the results of this latter approach might also be a useful adjunct to the clinical methods now employed. The present study reports the results of such an attempt. School-aged children and young adults from special education classes were targeted for a quantitative/descriptive communication needs assessment.

Method

Subjects

This study focused on 25 nonspeaking students with disabilities enrolled in special education programs in local schools from the Sacramento and San Juan Unified School Districts. These students were referred by the school districts to our more extensive project for a comprehensive assessment of their motor, cognitive, and language skills preparatory to the recommendation of a suitable augmentative communication system. The 20 males and 5 females ranged in age from 7 to 21 years, with a mean age of 13.7 and a standard deviation of 4.3 years. Nine students were ambulatory and 16 used wheelchairs. Nine of the group lived in local residential facilities and 16 lived at home. Twenty students were diagnosed as having cerebral palsy; the remaining five each had a distinct and different neurological or neuromuscular diagnosis (e.g., head trauma). The most appropriate symbol system by means of which the students could communicate was also known. Eleven of them could use orthographics (reading, spelling) as their primary symbol system, 10 of them could use an alternative symbol system (e.g., Blissymbolics), and 4 could communicate primarily via pictures.

Since most of the students could not presently express their communication needs, it was necessary to attempt indirectly to describe these needs. For this purpose an “informant” group was identified as those persons who were very familiar with the students and who could therefore speak to the student’s needs. This group included parents, close relatives, teachers, aides, social/case workers, residential facility personnel, and (when possible) peers of the students.