

BASIC NEEDS: LITERACY, EDUCATION AND COMMUNICATIVE RELATIONSHIPS

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During much of the history of education, there has been relatively little support given to the education of the handicapped. It was not until in the 1950's that we saw local responsibility for educating the handicapped develop to a significant degree. As a result of this movement, we saw the development of special education programs in school districts throughout the United States. Perhaps with the new legislation directed toward education for the handicapped it is reasonable to observe that finally, education is now beginning to achieve its great goal of democracy; equal educational opportunity for all. This statement, however, is issued with a degree of caution since the wording of the law is limited by the understanding of those responsible for its implementation.

A guiding philosophy in programs of special education has been the belief that *equal* educational opportunities assumes that there will be *different* education experiences for all who need it. We know, for example, that profoundly deaf children need education programs different from those provided to children who are hard of hearing, even though both are hearing handicapped. The hard-of-hearing child with appropriate educational strategies and proper amplification will generally develop a fairly good understanding of the English language. He can be expected to generalize his use of English to enhance reading, writing, oral and aural communication skills. On the other hand, the profoundly deaf child will generally have far greater

difficulty learning the English language, and will be severely limited in his ability to generalize its use. From a history of experience, educators of the deaf have learned that strategies used to educate and train the nonhandicapped population are often inappropriate and unproductive when implemented with hearing impaired individuals.

Although normal hearing, hard-of-hearing and profoundly deaf children generally require different educational considerations, their ultimate basic needs remain the same. They each have a basic need for literacy, education, and communicative relationships in order to be a "prepared person". By *literacy*, I refer to individuals who are able to read and write the English language sufficiently well to enable them to take advantage of special or regular educational programs, and to maintain an adequate level of social and job-related knowledge and skills. By *education*, I refer to individuals who are aware of the complex world they live in, are cognizant of the historical events which produced this world and the society they are a part of, and who have developed a set of moral and spiritual values to assist them in making future everyday decisions. By *communicative relationships*, I refer to individuals (particularly deaf individuals) whose personalities have been influenced by a variety of successful communicative interactions with both hearing and other deaf persons. It has been suggested that as much as 85% of all the success individuals achieve can be attributed to the personality they communicate to others

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(Sill, 1958).

The challenge to educational programs, therefore, is to provide deaf individuals with the educational and training experiences that will develop the tools which are fundamental to their achieving these basic needs. Their eventual economic and social success is dependent upon the ability to both obtain and use their knowledge and skills. In that respect, it can be argued that the *tools* required for satisfying these needs are more important than education itself.

Traditionally, education has placed more emphasis on information dissemination than on communication. When information must be given or received through impaired communicative channels, the educational or learning process is slowed down. Thus, we find deaf students often running several years behind their hearing counterparts in overall academic achievement. Their ability to read, write and speak the English language is the most noticeable area of retarded development. In the limited observations I have made of schools serving the deaf, I am impressed with the general lack of professionals who are prepared to provide the specialized training needed to develop communication skills. There sometimes seems to be a pre-occupation with the need to expose the students to the curriculum content rather than invest in the process of communication that underlies all learning.

When we see so many deaf students emerging from our public schools after 12-15 years of formal education, unable to effectively use the English language, I become concerned about what we are using both as our guide for providing educational experiences and as indicators of success. Many programs do not see a need to invest the major resources required to develop the communication skills that will enable deaf individuals to satisfy their basic need for literacy, education, and communicative relationships. Yet, unless these tools are acquired the role of educational programs is open for question.

The principle underlying the concept of equal educational opportunities is that education only begins when formal schooling ends.

For individuals to achieve their potential, they must engage in the life-long educational process that enables them to adapt to the social and technological changes in our society and to take advantage of the dynamic opportunities for economic and social success. We must realize, however, that in a real sense the opportunities for deaf individuals to acquire the communication skills needed to become and remain a "prepared person" essentially ends with formal schooling.

The National Technical Institute for the Deaf (NTID) is a post-secondary education program for deaf individuals located on the campus of Rochester Institute of Technology. Although NTID only has a ten year history, it values highly the need to develop the communication skills of deaf individuals and accepts that as a goal and a challenge. The guidelines under which NTID was established specify that its efforts to train deaf students should be focused "toward the goals of successful employment and preparation for full participation in community living". As a result of training, the aspirations of deaf individuals should be raised and they should be prepared to receive a high degree of personal development and a sense of social responsibility. Training in receptive and expressive communication skills is considered as a critical component of the overall programs, of the Institute. (Guidelines for the establishment of NTID, 1966).

There are some who might suggest that it is not wise to invest the resources needed to further develop the communication skills of adult deaf individuals. Many argue that beyond the mid-teenage years, the speech, speechreading, auditory discrimination, and the reading and writing skills of the average deaf person cannot be significantly improved. At NTID, we have found this not to be true of the young adult deaf population it serves. We are finding that they not only can improve in these skills, but in some areas they improve at a faster rate than was evidenced during their public school training. This is both reassuring to those providing the training and motivating to the students being trained.

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With NTID's focus on providing deaf students the opportunity to develop the knowledge and skills needed to earn a good living and live a good life, individual educational programs for students are focused on three fundamental components of preparation. One component is academic or technical preparation. Here all aspects of training needed to prepare the student to understand and perform the technical skills related to his work are identified and provided. The training programs that offer these experiences are those that the student majors in. Another component is the area of personal and social skill preparation. Here training is centered on preparing the student to manage himself, interact with other individuals, and to manage his environment. The third component is communication skill preparation. This includes the specialized training and experiences which assist the student in developing the tools needed to read, write, take advantage of educational opportunities, and engage in successful communicative relationships.

Efforts to train students in each of these areas are directed toward preparing them for the environments within which they now live or in which they will eventually live, such as the home, school, work and community. As we consider these environments in terms of the training components, we can form a conceptual framework for career development or in other words, individual educational program planning. For each student, consideration can be given to the level of skill development needed to function communicatively, socially, and technically in each environment. It is important to consider all three components as being equally important in the career or educational development process. Here is where an imbalance is often found within traditional deaf educational programs.

Using this conceptual framework as a reference, the Division of Communication Programs at NTID assesses the communication performance characteristics of each student upon entry. Assessment is made on each of several receptive and expressive skill areas needed to provide a data base from which

decisions can be made with respect to establishing individualized training programs. The characteristics assessed for receptive skills are: 1) hearing (speech) discrimination, 2) speechreading without sound, 3) speechreading with sound, 4) manual reception, 5) simultaneous reception, and 6) reading comprehension (language). The characteristics which are assessed for expressive skills are: 1) speech intelligibility, 2) writing intelligibility (language), and 3) non-verbal emotive intelligibility (body language).

Experience in assessing communicative effectiveness has shown that performance in each of these receptive and expressive skill areas affects the individual's overall ability to communicate. This then becomes the basis of our clinical training program. I will briefly explain the nature of the assessment in each of these areas and how the results are used in the training of individual students.

Upon entry, each student's hearing is tested to determine the nature and extent of residual hearing that might be available. Only ten percent of our students have no measurable hearing. Previous experience with hearing aids is also determined. The student's ability to utilize existing residual hearing for communication purposes is assessed on the basis of how well speech is understood through hearing alone, through speechreading with sound, and through simultaneous reception. The materials used to assess performance skills in these as well as other receptive areas such as speechreading without sound and manual reception, are standardized lists of everyday social sentences. Levels of performance are determined by the amount of information received which is rated on a scale of 1 to 5, with 1 meaning essentially no information was understood, and a 5 meaning essentially all the message was understood. A 3 on the other hand would indicate approximately 50 percent functioning effectiveness. Reading comprehension, however, is assessed on the basis of grade level performance using a standardized reading test.

To assess expressive skills, performance is rated using the same scale of 1 (poor) to 5 (good), but applied to how well the deaf student is able to communicate his message to a

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hearing person. Speech intelligibility is assessed by having the student read aloud a prepared message which is recorded on audio tape. The recording is played back to a panel of trained listeners who rate the intelligibility of the individual's speech.

Writing intelligibility is assessed by having the student describe in writing, an event which he understands from viewing an animated cartoon film which displays an easily understood life situation.

For students who have not developed intelligible speech or writing skills, their ability to communicate information through the use of non-verbal body language is assessed. Performance is assessed by video taping the student while he communicates the solution to a clearly defined problem using only non-verbal gestures.

Additional diagnostic tests are conducted in some areas to provide specific information needed to plan the clinical aspects of each student's training. Decisions with respect to how training is to be sequenced and carried out are made by a committee of trained specialists based on their evaluation of the total set of data received from each of the performance and diagnostic tests. The student's individualized communication training program developed by this group of specialists is forwarded to his technical career counselor. It then becomes the responsibility of the student and his career counselor to develop a formal individual educational program, which includes the training components needed for technical, personal and social, and communication preparation. Upon the completion of each quarter's communication training, clinicians and classroom instructors make recommendations for each individual student as to whether or not the student is prepared to proceed with the next step of his training program as originally planned. Any recommendations for change are reviewed and approved by the committee of specialists responsible for establishing individualized communication training programs.

To insure that the need for communication training is understood and appreciated both by

the student and his technical career counselors, an audiologist, speech pathologist, and English specialist are assigned from the Communication Programs as liaison advisors to each of the technical training departments where students are majoring. These individuals are prepared to serve as resource specialists to the technical training programs for matters related to the area of communications and to assist in counseling students and providing input to classroom teachers. This is an important component of the system used to manage the overall individual educational program of students.

Although we have far to go in developing the levels of communication skills needed by deaf individuals to enjoy economic and social success, some significant accomplishments are being made. To illustrate this, let me review some of the positive effects we are seeing in training communication skills with deaf young adults. Although we have found that only ten percent of the students entering NTID do not have measurable hearing, approximately half use hearing aids all or most of the time. Of those who are not regular hearing aid users, approximately 28% own hearing aids but for various reasons do not wear them most of the time. The remaining students have either never owned a hearing aid or do not own one when they entered NTID. Their reasons for not using amplification are based on a variety of influences such as an improperly fitted hearing aid, peer pressures, or the attitude that since they are deaf, they are not able to benefit from a hearing aid. A special program has been developed at NTID to orient and train deaf students with respect to the potential benefits they might expect from amplification, the relationship of hearing to both receptive and expressive oral skills, and the careful selection process needed for difficult-to-fit cases. The program also includes some basic training in and trial use of hearing aids. Nearly 90 percent of the students who complete the program accept a hearing aid.

A program of individual speech therapy has been developed which enables students to decrease their articulation errors at a rate of 10 percent for each quarter of training they

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receive. The reduction of articulation errors is highly correlated with improvement in intelligibility. Notable gains are also being achieved in areas dealing with written language. For example, students improve at a rate of 1.47 grade levels in the area of reading vocabulary, 1.24 grade levels in the area of reading comprehension, and .73 score points in written language for each year of training they receive. It is important to note that written language is not scored on the basis of grade. These levels of improvement can best be appreciated when considering the level at which our students function in these areas when they enter NTID. For example, the average reading level of entering students is approximately eighth grade. This would imply that during the thirteen years of educational history prior to entering NTID, our students have an average yearly increment in reading comprehension of only 0.65. Thus, we see evidence that the English skills of these students are increasing at a faster rate than evidenced during their previous educational experience.

Although these are only a few examples, they reflect the kinds of improvements that are being made in each of the areas of communication training. A relatively new area of training to be introduced in the Communication Programs at NTID is that of training deaf students in the use of telecommunication devices. A series of courses are being developed and offered to provide students with an understanding of and experience with various special

telecommunication devices including the standard telephone. Although most deaf individuals can learn to use such devices as the Teletypewriter (TTY), 25 percent or more of NTID's students possess the oral/auditory skills sufficient to enable them, with training in appropriate strategies, to make use of standard telephones. There are many factors to be taken into consideration in training them to use the telephone, such as their ability to understand speech through audition, speaking ability, and general English language skills.

As we look toward the next decade of education for the handicapped, I am concerned that we not lose sight of our ultimate goals of equal educational opportunities for all handicapped individuals, and of sufficiently effective training programs to insure that they receive the preparation needed for future economic and social success. As educational institutions accept responsibility for educating the handicapped, particularly with respect to the deaf, there must be an understanding of the responsibility for providing appropriate training in all of the components needed to develop a "prepared person." The training of communication skills for the deaf is fundamental to achieving their basic need for literacy, education, and communicative relationships. Without each of these being achieved, individuals are not "prepared" and cannot be expected to enjoy long-range economic and social success.

REFERENCES

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