CHANGE IS THE NAME OF THE GAME

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The American people have no reason to be satisfied with their limited success in educating deaf children and preparing them for participation in our society.

—A Report to the Secretary of Health, Education, and Welfare, 1965

The crisis in the education of the deaf has many facets. All of them put together create a very difficult situation for deaf children and deaf adults as well as for the teachers and parents of deaf children.

In 1965, a blue ribbon committee reported to the Secretary of Health, Education, and Welfare on their comprehensive study of education of the deaf. The sentence quoted above is the beginning sentence in the summary of that $100,000 report. Persons interested in the education and well being of the deaf cannot ignore the broad implications in the Report that deaf people are inadequately educated for coping with the complications of the modern world.

These inadequacies have several aspects that are of major consideration to all persons concerned with education of deaf children.

1. *Vastly improved medical knowledge has almost eliminated the deaf children who lost their hearing after speech and language were established.*

Previously, in the schools for the deaf, these postlingually deaf pupils provided leadership and a kind of "elite" high achievement milieu for the many less well-performing deaf students. In addition, those with better communication skills were able to explain to their classmates the material presented by the teachers, thus helping the comprehension of those students with poorer communication skills.

As these superior deaf children grew to adulthood, persons outside the field of the deaf were often mislead into thinking that all deaf people performed at the level of these few deaf individuals and that all deaf persons had equally good language and speech. The ability of these few to communicate with both deaf and normally hearing individuals placed them in leadership roles in the deaf adult community.

2. *Medical skill saves the lives of children who, in earlier times, would have perished in infancy. Many of these children are DEAF AND . . .*

In schools for the deaf, increasing numbers of children are not only deaf but also have additional deficits. These children may have

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auditory and visual functions that are not normal; they may also have problems in processing some communication modes.

Multiply handicapped deaf children usually achieve very slowly and absorb a great proportion of the time and energies of persons who work with them. Limited achievement early in life further complicates the ability of the DEAF AND . . . children to assume adult responsibilities.

3. *Accurate testing of achievement levels of deaf children is very difficult.*

One of the evaluation instruments routinely used in the testing of deaf children is the achievement test. Achievement tests are sampling devices. They pick a few words from thousands of possible items. These selected items are used as an index of what an individual can do in reading, mathematics, and other areas. In a sampling procedure, it is assumed that if the individual being tested knows a certain word, he also knows many related words and can use them. For example, if the child knows the meaning of the word "horse," it is assumed that he knows other similar words—perhaps, "cows, chickens, barn," and so on. With the deaf child, this is not necessarily so. He may know only a few of the related words, and the majority of the words represented by the test item are unknown to him. This means that, even though the deaf child may score at a second or fourth grade level, he does not really read that well. He does not have the command of language that the test infers. Deaf children do better in arithmetic computation than in problem solving, since the latter demands a higher level of language competence.

Gentile and Ries (1969) reported achievement tests of deaf teenagers. If the scores from the Advanced Stanford Achievement test for seventeen-year-olds *(Figure 1)* are compared with the scores from the Intermediate test for seventeen-year-olds *(Figure 2),* the scores from the latter are, on the average, one-year-and-a-half lower. These results indicate that spurious scores may be yielded by the Advanced Test when administered to deaf students. These scores also demonstrate one of the difficulties that may be encountered in the administration and interpretation of tests in the area of deafness.

4. *In the years since the Second World War, the educational attainment of the normally hearing has increased; there has been NO INCREASE in the average achievement levels of students who leave the schools for the deaf.*

It has been estimated that the achievement level of the normally hearing high school leaver, including graduates and non-graduates, has increased approximately one year each ten years since the War. Normally hearing persons are getting out of school today with a better command of language, a greater knowledge of people, places, and things, and a vastly superior background in technology.

During the same thirty years, deaf school leavers have failed to im-

prove their achievement levels or their communication skills. This lack of progress has taken place in spite of improved educational methods and greater efforts on the part of educators of the deaf. The disparity between the present day preparation of normally hearing and deaf individuals increases the difficulties faced by deaf persons in competing with hearing people for jobs and "worldly goods."

In 1964, Dr. Edmund B. Boatner, then superintendent of the American School for the Deaf, carried out a survey of the achievement levels of deaf secondary school leavers in which he acquired data on 1,277 school leavers. This number was estimated to represent 93% of the total school leavers of that year. *Only 70 of the 1,277 school leavers achieved 10th grade level or above.* This group included those who received a diploma (N=530), vocational diplomas or certificates (N=352), attendance certificates or equivalent (N=167), and those who left school without any certificate (N=228). It should be noted that fewer than half of these students obtained an academic diploma.

The academic diplomas certifying to high school graduation were given to 530 students. These graduates scored an achievement level of *third grade to twelfth grade.* Pupils who received diplomas from the residential schools averaged eighth grade, and the student from the day and denominational schools averaged seventh grade.

Boatner's study indicated that out of 88 schools for the deaf, only 70 students achieved a tenth grade level or better. It appears that the concern felt by persons interested in improving the education and communication skills of deaf children and adults is justified.

The Office of Demographic Studies at Gallaudet College collected achievement test scores in the Spring of 1969, on more than 12,000 deaf pupils. From the demographic data, the Southwest Regional Media Center for the Deaf prepared the chart shown in *Figure 3.* The grade equivalent of the reading scores is given for deaf students ranging in age from 7 to 17 years of age. The average grade equivalent scores in reading for the seven-year-olds was 1.65 and for the seventeen-year-olds, 4.02. It is interesting to note that on the Stanford Primary 1 Reading Test, the average score for seven-year-olds was 1.65 (N=172) and for the eleven-year-olds, 2.04 (N=178), or an *increment between the ages of seven to eleven of less than one-half year in reading.*

On Primary 11, a very simple test of Reading, the ten-year-olds scored 2.38. At fourteen years of age, the average score was 2.44 No progress had been made during the four-year interim. The Stanford Intermediate 11 Test in Reading yielded an average grade equivalent score for the thirteen-year-olds of 3.97 (N=166) and seventeen-year-olds (N=148), a score of 4.02. Thus, for practical purposes, it appears that *after the age of 13, the children tested showed no further increase in reading ability.*

David Denton (1966) made a survey in 26 of the largest schools for the deaf. He reported the achievement scores for the top 10% in word meaning, paragraph meaning, spelling, language, social studies,

and arithmetic computations, concepts, applications, and reasoning. In the school displaying the best average scores of the above-mentioned areas, the top 10% of the students scored 9th grade 5th month; in the school showing the lowest scores, the top 10% averaged 6th grade 3rd month. There was a three-grade difference in the achievement level of the top students in the 26 schools.

The scores discussed above are evidence of the shocking failure of the educational programs that have been provided deaf children. These scores become even more meaningful in the light of an article in the Wall Street Journal (1927):

> *Definitions of illiteracy differ, but most companies agree that at least an eighth-grade grammar school education is needed for workers to follow the instructions for all but the simplest job.*

It is readily apparent that the majority of deaf adults do not obtain the minimum requirement of an eighth-grade level of education.

5. *Early vocational training advantages of deaf persons have been lost.*

Massive vocational training efforts aimed at meeting the needs of young normally hearing people have gradually gained momentum since World War I. At the beginning of this period, the product of the schools for the deaf was generally well prepared to enter the job market. Young deaf adults successfully competed with young hearing people who had no such preparation.

Today, the situation is reversed. All young hearing people, if they wish, may leave the secondary school after having developed their skills in modernly equipped vocational schools. All too often, the schools for the deaf have been unable to keep up with the rapid technological changes in equipment.

THE NAME OF THE GAME IS CHANGE

It is evident from reading the achievement statistics referred to above that the methods, procedures, techniques, and materials used in educating deaf children largely fail to prepare them to function at the optimal level of native abilities and potential competencies. Poor communication skills and a lack of training in modern technological vocations further complicate the plight of deaf adults in competition with normally hearing workers. As a result, a large percentage of deaf people are, and will continue to be, underemployed or unemployed, and peripheral to the hearing community.

Change 1. Infant auditory screening procedures should be mandatory.

Psycholinguists have been stressing that the first five years of life are the years in which basic symbol systems for communication are developed. Additional evidence to support this theory is appearing in

reports from early childhood educational programs for children with language deprivation from causes other than deafness.

Accordingly, if good language usage is to be established in deaf children, they must be identified at an early age in order for language habilitation to be instituted. This can best be effected through parent training and correlation of all peripheral activities with the home program.

Specialists in the areas of medicine and communicative disorders need special training in the identification, diagnosis, treatment, and education of deaf babies and young children. Responsibilities for continuous monitoring of deaf and high risk children need to be assigned to various types of health workers such as public health nurses, school nurses, and welfare workers.

Change 2. Receptive and expressive communication modes must be established early.

Programs carried on in the homes of deaf children are expensive, but this is probably the only effective approach to early language training. For the most part, parents of deaf babies either cannot or will not attend training programs away from home.

Everyone, including parents, siblings, grandparents and other relatives, neighbors, and friends, needs to be able to communicate with the deaf child in order to provide him with a rich language environment. Ideally, the audiologist, pediatrician, otologist, dentist and other health workers should be able to communicate with deaf children and adults. It is only in this manner that the deaf youngster will be able to develop a communication matrix for English as it is used in the environment into which he is born.

In contrast to the deaf baby, the normally hearing infant begins to receive a communication *input* the day he arrives. All the people in the household talk. When the baby is awake, he has a saturation of oral aural language, even though he does not understand a word of what is being said. He begins to understand the tones of voice that are used to tell him is he is being loved or scolded. In time, after the words have been repeated endlessly, the baby begins to understand the meaning of the sounds. Gradually, the hearing child uses words and sentences and, by the time he is four years of age, he asks the same question repeatedly. He is continuously increasing his vocabulary by association with visitors in the home and through listening and watching television programs.

The deaf child often does not know he has a name by the time he is four years old. He has no understanding of what people are saying, and the time during which he can achieve that facility for establishing a mode for interpersonal communication passes quickly. Deaf children must be given language through a communication avenue they can utilize. This avenue must be *visual* in addition to whatever cues may be

available to him through audition. If he cannot *hear* English, he must be able to *see* it.

One of the approaches that has proved effective in helping young deaf children establish language is finger spelling—always accompanied by speech and auditory cues. The deaf child is thus provided with the English language matrix through the visual avenue just as the hearing child receives communication through the auditory avenue. Both receptive and expressive communication are available to the deaf child, if the persons around him will meet him half-way by learning to both send and receive finger spelling or, in some cases, signs.

The utilization of all modes for establishing communication is called "total communication." This approach utilizes manual language in conjunction with speech, lip reading, auditory input, and the usual cues of pantomime, gestures, and facial expression. Total communication does not, in any way, damage or interfere with speech production, lip reading, and auditory input. On the contrary, total communication encourages the child to communicate—to communicate better—because he has the concepts and the syntactical and grammatical formats with which to express his ideas (Meadows, 1968; Montgomery, 1966; Quigley, 1968, Stuckless and Birch, 1966; Vernon and Koh, 1970).

In the case of the very young child, or the child who is suspected of having more than deafness as a communication barrier, it may be desirable to begin signing to him, changing to finger spelling as soon as his visual and motor skills have developed sufficiently to permit him to follow and produce the rapid movements.

Change 3. Early admission to formal training programs.

Until a few years ago, deaf children were not admitted to school until they were six or seven years old. Two states still have six years as the admission age. It has been demonstrated that the matrix for symbolic communication is developed and largely matured by the age of six years, therefore, deaf children need to be exposed as early as possible to the communication matrix used by the society in which they are to function.

For optimal attainment, a deaf child should enter an educational program at three years of age, or earlier, if home training programs are not available to assist the child in language acquistion.

Change 4. Sophisticated personnel, clinical as well as other, needs to be prepared in the area of deafness.

The inadequate number of dedicated, concerned, sophisticated, skilled teachers of the deaf who are interested in the teaching of deaf children as well as those for whom deafness is only one of several disabilities is of great concern. Teachers and clinicians who are responsible for the programs of these children need to know about learning theory, prescriptive teaching, and instructional technology. Teaching through technology is advancing at a startling rate; it will take sophis-

ticated, skillful, prescriptive professionals to say what procedures and programs should be used with each child.

The name of the game is change... change for parents, for professionals, and, let us hope, change to better communication and education for deaf children. Better communication and better education are prerequisites for better vocational placement and social adjustment of deaf adults. Then, the peripheral existence of deaf people in present day society may be changed to optimum participation in the future.

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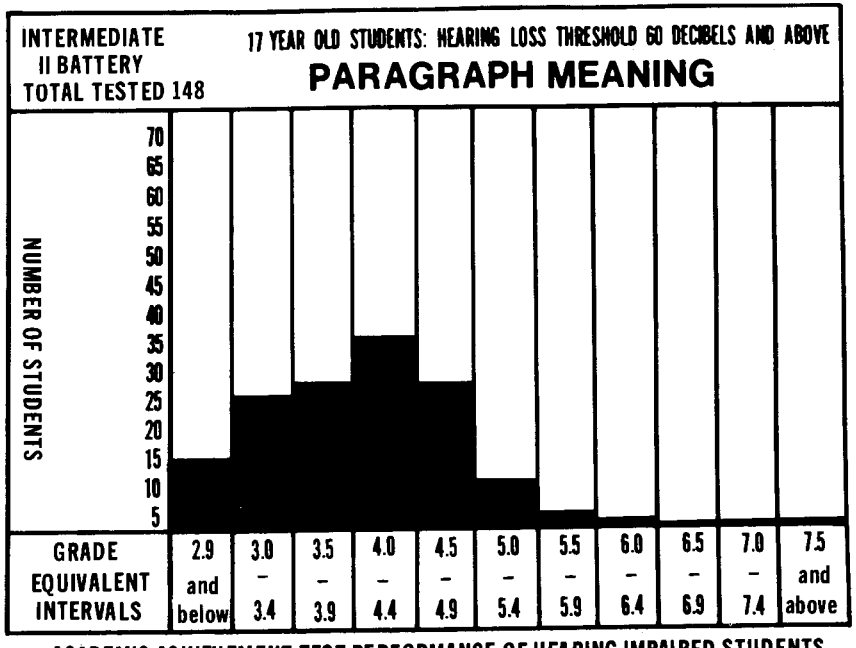

ACADEMIC ACHIEVEMENT TEST PERFORMANCE OF HEARING IMPAIRED STUDENTS
UNITED STATES SPRING 1969 OFFICE OF DEMOGRAPHIC STUDIES
GALLAUDET COLLEGE–WASHINGTON, D.C.

Figure 1

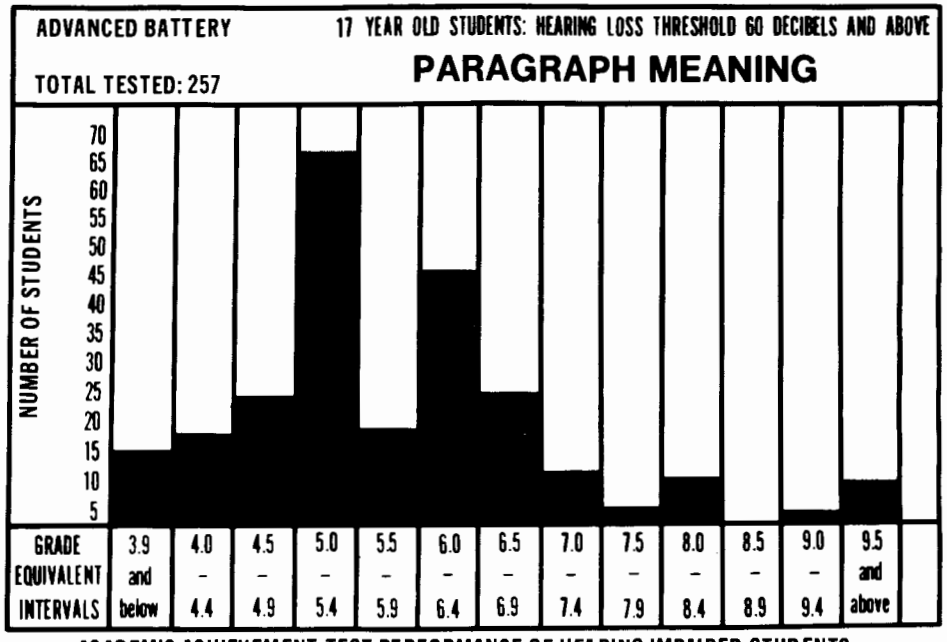
ADVANCED BATTERY
17 YEAR OLD STUDENTS: HEARING LOSS THRESHOLD 60 DECIBELS AND ABOVE
TOTAL TESTED: 257
PARAGRAPH MEANING
NUMBER OF STUDENTS
70
65
60
55
50
45
40
35
30
25
20
15
10
5
GRADE EQUIVALENT INTERVALS
3.9 and below
4.0 – 4.4
4.5 – 4.9
5.0 – 5.4
5.5 – 5.9
6.0 – 6.4
6.5 – 6.9
7.0 – 7.4
7.5 – 7.9
8.0 – 8.4
8.5 – 8.9
9.0 – 9.4
9.5 and above
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Figure 2

Mean grade level of students with 60db (ISO) or greater hearing loss. Academic Achievement Test Performance of Hearing Impaired Students U.S. :Spring 1969. Office of Demographic Studies, Gallaudet College, Washington, D.C.

Reading

Age	7	8	9	10	11	12	13	14	15	16	17	18	19
Test Battery													
N	172	265	403	334	178								
Primary I	1.65	1.87	1.91	1.97	2.04								
N				303	284	221	156	130					
Primary II				2.38	2.58	2.41	2.51	2.44					
N						157	221	174	191	151			
Intermediate I						3.41	3.46	3.33	3.33	3.35			
N							166	179	192	198	148		
Intermediate II							3.97	4.31	4.24	4.17	4.02		

Total Students

Prepared by Southwest Regional Media Center for the Deaf

Figure 3