

# **THE SCHOOL-EDUCATIONAL AUDIOLOGIST**

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I would like to present a few ruminations about a possible new role for the audiologist. In fact, many of you may well feel that I am discussing a new type of audiologist, the school audiologist. I realize that there may be some distress with the adjective school with some of you saying that a more operational description would be educational audiologist. In any event the title school audiologist or educational audiologist seems to have high reactive connotations. I feel that many individuals are more bothered by the semantics of the title than by the functions of such an individual.

A point that needs to be made at this time is that we need to clarify terminology in our profession, especially if we believe that audiology is the general title for a profession which assists the hearing impaired. If we use terminology that omits the word audiologist, especially when we describe the person who works with the hearing impaired in the school setting, I think we tend to confuse the issue as well as ascribing second class citizenship to such an individual. We should keep in mind as we go about future efforts to modify professional roles that there is a basic profession (audiology) and if persons assume new professional roles, that we should use the appropriate adjective along with the basic professional identification in our description of those persons.

Let me try to provide some justification for the development of an academic training program for the individual to be named a school or educational audiologist. Before starting to develop this justification I should indicate that at this point in time, I will be talking about a professional who will be providing assistance to only the hard of hearing child.

## **THE HARD OF HEARING CHILD**

When we speak of the hard of hearing child we are talking about a child who has been labeled but about whom we have very little information. Our research efforts in audiology have tended to ignore this child and as a result we know very little about him. We have raised many questions about him and we have made many clinical and educational assumptions about him. However, we still do not know if he has a significant language deficit and, if he does, what is its extent. Also, we do not know the nature of his educational deficit, or the nature of his behavioral patterns or his educational needs.

Several authors have indicated their concern about this child. Carhart (1969) has said, "partial hearing impairment among school children is a problem which, though critical to the child possessing it, is not so prevalent that it is easy to mobilize groups of such children for special educational management, except in larger metropolitan areas."

Hardy (1969) has written, "by and large, in terms of his potential, and what can be done to alleviate sensory deprivation and to close the language gap, the hard of hearing child has been one of the most neglected of our children. All too often, he is not identified until he has met with school failure, often thought to be stupid, and seldom receives the help he needs to enable him to keep up with his hearing peers. All too often, even when identified, there are not adequate facilities for his needs. He is either buried in a group of deaf children, or left to struggle without adequate supportive help in the regular educational system." Blair (1969) has suggested that we might utilize more meaningful terminology and talk about the child with aural deficiency. Such a child possesses an auditory system which is incapable of normally providing him with environmental acoustic data to the detriment of his speech, linguistic and possible cognitive development. He has written, "there is a lack of adequate school programs for children with aural deficiencies such as the hard-of-hearing and/or auditory imperception cases. An administrator of a preschool center for young hearing impaired children states emphatically that she reaches a dead end when she must find a school program for her hard-of-hearing children. Many of these children in the United States go into classes for the severely deaf. In some instances, following this, they may be excluded from these same classes because they are so much different from the deaf children. Another problem appears to involve those hard-of-hearing children who may achieve satisfactorily in the early grades, but gradually fall behind at the upper elementary levels. Obviously, the greatest difficulty is with those who cannot use amplification well, or who have a typical behavior."

In summarizing the status of the hard-of-hearing, Carhart (1969) says, "hard-of-hearing children stand as a population whose needs and potentials are essentially unknown. These children, unlike their deaf brethren, have not been the object of long-term social concern. Hence, they have not been clearly identified, nor made the object of a zealous analytical and educational endeavor."

In the same vein, Hardy (1969) has written, "a kind of litany is employed — hearing aid, auditory training, speech and lipreading, language stimulation and training, and parental counseling. All too often, these steps are carried out as discrete, loosely related endeavors with limited appreciation of their fundamental interrelationships, much less developed into a carefully programmed sequence designed to make language in all modalities a reflexive tool for the child."

The Joint Committee on Audiology and Education of the Deaf in a study of current practices in the education of hard-of-hearing children (1969) provided the following comments. "It appears that in certain areas, there are neither specialists in the problems of the hearing impaired child, nor guidelines at the state level available to local school districts. Such state leadership and responsibility is desirable to develop the types of state, regional, and county programs that can provide realistically for the multiple needs of hearing impaired children. A mini-

imum of 31% of the local school districts that participated in the survey indicated that they were unable to provide all of the special educational services that are needed by their hearing impaired students. Communication skills development services is the service which is most frequently provided. This service is usually provided by persons certified in speech pathology." The committee recommended that if speech clinicians are to continue to provide such services, they should receive exposure to more audiology courses during their training. The major conclusions of the study were as follows:

1. Neither hearing testing nor educational services are being provided to the extent they are needed.
2. Frequently, when such services are provided, they are provided by personnel who most probably have other responsibilities or whose area of specialty is neither audiology nor education of the deaf.

Recently, Roche and Neal (1972) indicated that some of the blame for the lack of services for hard of hearing children can be placed upon state certification agencies. They indicated that if state educational agencies refuse or neglect to offer certification in all areas of speciality for hearing impaired children they relegate obligations and responsibilities to other specialists which are above and beyond their regular duties.

At this point, you will probably want to ask for statistical information. How many hard-of-hearing children are there? It would be a reasonable question and some data are available. If we use estimates which have resulted from previous surveys in the United States, we could safely say that one and one-half to three percent of the total school population may have a hearing defect severe enough to require special medical care and educational help. Approximately .01 percent of these children are deaf, which leaves us with approximately one to two and a half percent of children who are significantly hard of hearing. Data from screening surveys in the Chicago Public Schools indicates that 2.5 percent or some 3,079 children had greater than a borderline hearing loss.

We can broaden the question and ask, "how many state departments of education provide services to the hard-of-hearing child?" Roche and Neal, in the previously mentioned article, reported on the results of a survey which employed a questionnaire which was mailed to fifty state departments of education. Thirty-nine states replied. Some of the replies need to be reported. For example, seven states reported they had consultants in aural rehabilitation or deaf education. Eighteen states reported that they offered certification in audiology. A total of 489 persons were so certified. Some type of service was provided for the hearing impaired by 27 states. As a result of this survey the authors were able to indicate that approximately 23.3 percent of hard of hearing children (in 39 states) received some type of assistance.

However, I do not feel that such incidence figures provide the data

that is important. Rather, we need to know how many children do not receive help and what effect the lack of help has had upon the child's academic future. If you are more inclined to the power of positive thinking, I could reword the question and ask, "how many of these children have received effective assistance?"

#### **THE HARD OF HEARING CHILD**

The concept of a specialist to work with the hard of hearing in a school situation is not a new concept. I would like to read a few job descriptions that have been received at our University in the last few months.

1. *Special School District of St. Louis County, Missouri.* Hearing clinicians to work with auditorially impaired children who are enrolled in regular public school classes and provide supportive service in auditory training, speech reading, speech and language. Such individuals will establish their case loads from children leaving classes for the auditorially impaired and from referrals initiated by the staff audiologists. Because of the nature of the children's handicap in this program, most of the children receive individual attention.
2. *Hearing Clinician - Joint County System, Ft. Dodge, Iowa.* The hearing clinician's duties include providing services necessary for the identification of public school pupils having hearing impairment and for planning and providing special education services for them. The hearing identification program will include coordinating and supervising para-professional personnel who will assist in the hearing screening program.
3. *Special Education Association of Peoria County.* A total program which would include all features necessary to a sound educational program for deaf and hard-of-hearing children, such as; a program of early identification, a comprehensive hearing conservation program, home visitation programs for very young children and locally based nursery programs, parent education, a program of language, subject matter and communications for hard-of-hearing children attending their local schools, a centrally located program for primary and elementary deaf children, provisions for the newest concepts in educational procedures, instructional media and auditory education — to name a few of the items listed.

Also, one university (Utah State University) has developed a training program for a new specialization which they have named educational audiology, which has as its stated purpose the spearheading of the alleviation of the educational retardation of the hard of hearing. The training program prepares individuals to work in the area of educational audiology.

## GOALS FOR A PROGRAM

At a minimum, comprehensive management of the hearing impaired child should involve close cooperative activity with clinical audiologists, hearing clinicians and teachers, in the following areas:

1. Case finding, evaluation and educational placement.
2. Remedial management in terms of:
  - a. language development
  - b. work with oral speech
  - c. training in speech perception
  - d. development of auditory and visual perceptual skills
  - e. use of amplification and development of speech production
  - f. academic needs (with the assumption that additional exposure to academic materials will not solve problems in this area. These children will have been exposed to a great deal of academic material. They may not have gained too much from such exposure because of a receptive problem or because of a language difficulty. They require supportive, remedial management not more academic exposure).

Approaches that could be used by the school-educational audiologist, to meet the above, would include the following:

1. amplification for functional hearing
2. continued adjustment to amplification
3. improvement of oral communication skills by amelioration of developmental lags in speech and/or language skills
4. continued visual and auditory communication training
5. achievement of educational adjustment to a homogeneous group of hard-of-hearing peers
6. achievement of adjustment to non-hard-of-hearing peers
7. achievement of individual potentials for integration into the regular classroom
8. development of practical personal and social orientation to family, peers and school personnel

These approaches would be implemented by the following:

1. early detection
2. pre-school services and programs
3. transitional programs — between pre-school and regular school programs
4. resource rooms — for children who may be able to be integrated into regular classrooms

The individual providing such services could be permanently stationed or itinerant.

## DIAGNOSTIC APPROACH

The diagnostic approach that would be employed by the school/educational audiologist would involve more than hearing screening. The school-educational audiologist would be interested in determining

the effects hearing impairment has upon the communicative behavior of the child with a hearing loss. The following areas could be evaluated: channel efficiency (visual, auditory, tactual and combined), information processing (reading ability and language facility), and cognitive abilities (ability to use reduced cues, synthetic ability, abstracting ability, and stored information). Such an approach would lead to prescriptive therapy, as well as encourage the development of means to evaluate rehabilitative procedures. In essence, the school/educational audiologist would be interested in an understanding of the behavior of hard-of-hearing children, as well as developing an understanding of approaches that could be used to modify such behavior. Major emphasis would not be placed upon the rote application of techniques.

#### POSSIBLE CURRICULUM

The logical question to ask at this time is, "can training programs produce such a person?" or "what type of curriculum would be required to train such an individual?" I will try to answer these two questions by presenting a possible curricular model that could accomplish such training. In describing this curriculum I will be describing a program of study that terminates in a master's degree. As such it will be a program that is tailored for five years of university training.

A. Professional Education and Related Areas	Semester Hours
1. A general understanding of the public schools from the study of materials such as history and philosophy of education, structure and function of the schools, procedures in directing learning; general knowledge about the procedures used with other educational handicaps.	6 - 9 s. h.
2. Knowledge and competency in the application of psychological principles derived from study of such areas as general psychology, human growth and developmental processes, educational psychology, tests and measurements, abnormal psychology, and the psychology of learning.	9 s. h.
B. Field of Specialization — Hearing Clinician	61 - 67 s. h.
1. Knowledge and understanding of the normal development and use of speech, hearing and language.	(16 - 18 s. h.)
a. Competencies specifically required include knowledge of anatomy and physiology of the speech and hearing mechanism, knowledge of and ability to apply phonetics, and knowledge of the acoustics of speech and of speech and language development.	

- b. In addition, the clinician should possess a broad and general spectrum of knowledge derived from the study of such fields as semantics, linguistics, physics of sound, speech science, communication theory, psychology of speech and language, developmental psychology, genetic and cultural aspects of speech and language, and psycholinguistics.
2. Understanding of the nature of communicative disorders and their etiologies as well as clinical competence in the evaluation and management of hearing impairments, specifically including study of disorders of hearing, hearing testing techniques and interpretation, speech and language training for the hearing impaired with emphasis on the hard of hearing, speech reading, auditory training, amplification including hearing aids and auditory training units, the psycho-social aspects of hearing impairment, and pediatric audiology. [Additional study from such subject areas as psychoacoustics, psychoeducational aspects of hearing disorders, advanced hearing testing techniques, hearing conservation, communication of the hard of hearing, audiological instrumentation. (28 - 30 s. h.)
3. Study in the field of speech and language impairments, specifically to include impairments of voice and articulation. Additional study of impairments of expressive and receptive language may be included. (7 - 9 s. h.)
4. Additional study from such background areas as guidance, clinical or abnormal psychology, psychology of personality, genetic and cultural aspects of speech and language development, specifically to include the study of counselling techniques. Other areas of study may include management of normal and abnormal behavior, educational training for children with learning disabilities, educational training for deaf children, organization and administration of special education services in the public schools, psychological tests and measurements, and psychology of learning. (10 s. h.)
- Practicum for the Hearing Clinician, 300 hours of direct clinical contact. At least 100 hours must be

completed with hearing impaired children in a state approved school program under the direction of a person holding appropriate certification. A reasonable distribution of hours should be earned in group or individual practicum in a state approved school and/or a clinical setting, with each of the following:

1. hearing evaluation
  2. management of hearing impaired children, including speech reading, auditory training, speech and language impairment of the hearing impaired as well as parent and client counselling.
- D. One year of paid professional experience in a school approved by the state, under the supervision of a person holding the appropriate certificate or its equivalent, i.e., the Certificate of Clinical Competence in Audiology.

I would like to add that it would be possible to develop a "core" curriculum from the areas of study described. This core curriculum could also apply for the individual training of teachers of the deaf. The core would consist of the following areas of study: anatomy and physiology of the hearing mechanism, phonetics, speech science or psycho-acoustics, hearing disorders, audiometry, aural rehabilitation, developmental linguistics, behavior modification or theories of learning and historical background of the habilitation and rehabilitation of the hearing impaired. I feel that the suggestions presented provide for a workable proposal. It should be considered in such a vein. I do not feel we can help the hard-of-hearing child by continuing our arguments as to who should have jurisdiction over such a child. Such statements as, "work with the hearing impaired can be only undertaken by an educator or by a teacher of the hearing impaired" are not relevant. I think the goals that have been outlined cannot be handled by an individual whose primary role is that of a teacher in that such an individual would be too occupied with class activities and academic materials to undertake the described activities. Also, the type of individual I have described requires skills which are not possessed by the typical teacher of the deaf. In essence, the school/educational audiologist would be responsible for a hearing conservation program which is concerned with the habilitation and rehabilitation of the aurally deficient child.

#### REFERENCES

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