AN APPROACH TO PROGRAM DEVELOPMENT

Hard of Hearing

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A project developed through cooperative finding:

Title I, ESEA
Title II, ESEA
Title III, ESEA
Title VI, ESEA
State Special Education
Vocational Education
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State Guidelines


Eligibility for placement in the West Central Joint Services Program was based on the following definition: "One in whom the sense hearing, although defective, is functional with or without a hearing aid."

Additionally, the 1969 State Guidelines delineate these criteria.

THE HEARING IMPAIRED

1. Population Base - A total school population base of approximately 30,000 may be required in order to serve this category effectively.

2. Joint School Services and Supply Program - If a school corporation is unable to provide an adequate program, it must plan to join with other school corporations in a cooperative program.

3. Grouping Arrangement - A sequential, continuous progression for each deaf child through no fewer than three of the following six grouping levels is required:
   - A. I Preschool (Ages 2-5)
   - B. II Primary (Ages 6-7)
   - C. III Primary Intermediate (Ages 8-10)
   - D. IV Intermediate (Ages 11-12)
   - E. V Junior High (Ages 13-16)
   - F. VI Senior High (Ages 17-18)

   A comprehensive program for the hearing impaired consists ideally of all six grouping levels as listed above. It must be recognized that early training for the deaf child (ages 2-5) is important.

4. Class Size - Class size shall range from no fewer than 3 to no more than 20 children as determined by the availability of teacher aides and the severity of the handicapping conditions.

5. Para-Professionals - The use of classroom para-professionals is encouraged as per rules and regulations of the Commission on General Education (in preparation).

6. Secondary School Program - In addition to the regular curricular offerings, the secondary school program for the deaf shall provide opportunities for work study assignments, prevocational counseling and training.

7. Special Equipment - Visual aids, auditory training equipment, and acoustical treatment such as carpeted floor, etc. shall be provided.

8. Supervisory Personnel - A qualified supervisor of the hearing impaired certificated as a teacher of the deaf should be appointed to coordinate the program.
### Introduction

Children with a temporary hearing loss or those children who have the type and degree of hearing loss which can be adequately compensated with a hearing aid may be placed in a class for the hard-of-hearing. The primary role of the teacher of these children is three fold. First, they are called upon to guide the parents to suitable medical and evaluative services and to instruct the parents in the educational procedures necessary to “help” the child at home. Second, the teacher must make the adjustments necessary in regular grade level curriculum content, in teaching methods and in scheduling so that these children can follow the appropriate grade level curriculum. Third, the teacher must add auditory training, training in speech reading (when necessary) and in speech and a massive and complete program of language development.

The goals of education for hard-of-hearing children are essentially the same as those for normal hearing children. In general, the instructional programs for the education of these children should contribute to their development of knowledge, skills, and attitudes necessary for educational achievement; self-realization; proper human relationships; economic efficiency; and civic responsibility but must be done within the framework described above.

The needs of the hard-of-hearing children vary considerably according to the degree of hearing loss, age of onset, intellectual ability, home environment, age at which educational management is begun and many other factors. The important thing is that all hearing impaired children receive the special education necessary to their changing, functional needs, on the basis of their individual differences.

The total program would include all features necessary to a sound educational program for the hard-of-hearing children, such as: (a) a program of early identification, (b) a comprehensive hearing conservation program, (c) home visitation programs for very young children and locally based nursery programs, (d) parent education, (e) a program of language, subject matter and communication for hard-of-hearing children attending their local schools, (f) a centrally located program for primary and elementary hard-of-hearing children, (g) provisions for the use of the newest concepts in educational procedures, instructional media and auditory education, (h) pre-vocational and vocational counseling, (i) academic and part-time work study experiences for older children—these programs to be coordinated with all local and state resources which can strengthen the total program.

Early education of the very young hard-of-hearing child should begin with a strong auditory-oral approach. There will however, be a wide variation in the educational needs of hearing impaired children. Individual differences will demand that full use be made of both the auditory and visual avenues of learning.

For most hearing impaired children, the auditory channel even though impaired will be the primary modality for language learning. For these children full utilization should be made in the use of modern amplification equipment and in the training of the residual hearing at home and at school.

For other children vision will be the primary avenue for language learning. The time for incorporating this combined method of communication instruction should be based on careful evaluation of the child.

Since each child will have varying potentials for learning, influenced by such factors as degree and onset of hearing loss, mental ability, physical capability and home environment, as well as possible limitations caused by other handicapping conditions. a spectrum of services should be provided ranging through specialized centers, special rooms, resource rooms, itinerant and tutorial programs in order to meet the needs of every child. In addition to the program in a specialized center, special classes for children with moderate to mild hearing losses should be developed locally and a strong pre-school program with infant and parent education must be coordinated with the regional program.

Many authorities believe much harm can be done to hearing impaired children through uncritical acceptance of the principle of the desirability of integrating handicapped with non-handicapped children in educational programs. While it is important that hearing impaired children have opportunities to interact socially with their peers, this factor should NEVER TAKE precedence over his having a maximum opportunity to learn language and the communications skills.

In order to provide the most nearly complete educational program possible for hearing impaired children, the joint services programs should develop special diagnostic and training services to provide special counseling and communication and language training for parents and children prior to the child’s enrollment in the school program. These services should be available to hearing impaired children and their parents from the time of identification, regardless of age, until the time of enrollment in school.

Because of the special educational problems and deficiencies of hearing impaired children, summer programs should be provided.

The responsibility for making educational recommendations and for determining educational adjustments and placement of hearing handicapped children rests with the qualified educator of the hearing impaired. Failure by some specialists to understand the significance of early hearing impairment in children and failure to recognize the dangers of even a mild degree of hearing loss on the total development of the child, frequently can result in gross misunderstanding of the educational needs of hearing impaired children as well as result in unnecessary delays in providing the proper educational services.

Table I. has been included because primary to the development of an educational program for each child is knowledge of the relationship of the degree of impairment to the educational needs of the child.
<table>
<thead>
<tr>
<th>Average of the Speech Frequencies in Better Ear</th>
<th>Effect of Hearing Loss on the Understanding of Language and Speech</th>
<th>Educational Needs and Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLIGHT 16 to 29 dB (ASA) or 27 to 40 dB (ISO)</td>
<td>May have difficulty hearing faint or distant speech. May experience some difficulty with the language arts subjects</td>
<td>Child should be reported to school principal. May benefit from a hearing aid as loss approaches 40 dB (ISO). May need attention to vocabulary development. Needs favorable seating and lighting. May need lipreading instructions. May need speech therapy.</td>
</tr>
<tr>
<td>MILD 30 to 44 dB (ASA) or 41 to 55 dB (ISO)</td>
<td>Understand conversational speech at a distance of 3–5 feet (face to face) May miss as much as 50% of class discussions if voices are faint or not in line of vision. May exhibit limited vocabulary and speech anomalies.</td>
<td>Child should be referred to special education follow-up. Individual hearing aid by evaluation and training in its use. Favorable seating and possible special class placement, especially for primary children. Attention to vocabulary and reading. Lipreading instruction. Speech conservation and correction, if indicated.</td>
</tr>
<tr>
<td>MARKED 45 to 59 dB (ASA) or 56 to 70 dB (ISO)</td>
<td>Conversation must be loud to be understood. Will have increased difficulty in group discussions. Is likely to have defective speech. Is likely to be deficient in language usage and comprehension. Will have limited vocabulary.</td>
<td>Child should be referred to special education for educational follow-up. Resource teacher or special class. Special help in language skills: vocabulary development, usage, reading, writing, grammar, etc. Individual hearing aid by evaluation and auditory training. Lipreading instruction. Speech conservation and correction. Attention to auditory and visual situations at all times.</td>
</tr>
<tr>
<td>SEVERE 60 to 79 dB (ASA) or 71 to 90 dB (ISO)</td>
<td>May hear loud voices about one foot from the ear. May be able to identify environmental sounds. May be able to discriminate vowels but not all consonants. Speech and language defective and likely to deteriorate.</td>
<td>Child should be referred to special education for educational follow-up. Full-time special program for deaf children with emphasis on all language skills concept development, lipreading and speech. Program needs specialized supervision and comprehensive supporting services. Individual hearing aid by evaluation. Auditory training with individual and group aids. Part-time in regular classes only if profitable.</td>
</tr>
<tr>
<td>EXTREME 80 dB or more (ASA) or 91 dB or more (ISO)</td>
<td>May hear some loud sounds but is aware of vibrations more than tonal pattern. Relies on vision rather than hearing as primary avenue for communication. Speech and language defective and likely to deteriorate.</td>
<td>Child should be referred to special education for educational follow-up. Full-time in special program for deaf children, with emphasis on all language skills, concept development, lipreading and speech. Program needs specialized supervision and comprehensive supporting services. Continuous appraisal of needs in regard to oral and manual communication. Auditory training with group and individual aids. Part-time in regular classes only for carefully selected children.</td>
</tr>
</tbody>
</table>
Incidence of Hearing Impairment

The actual number of children with some measurable degree of hearing loss is not known. Most estimates of incidence and prevalence of hearing impairment are based on studies of school children. Sufficient data have been gathered over the years to make possible approximation of incidence and prevalence. Roughly, 5% of school children may be found on screening to have a hearing loss sufficient to warrant further study or treatment. About half of these children or, roughly, 1½ to 3% of the total school population may actually have a hearing defect severe enough to require special medical care, educational care and educational help. Approximately 0.1% of school age children can be classified as deaf.1

An unpublished study from New York provides information on mis-diagnoses of children. This study of pre-school children diagnosed at the New York Hospital as having hearing losses, was conducted to determine under what diagnoses the referral of these children occurred. In less than 40% of the cases was hearing loss cited as a possibility. At least 60% had been diagnosed as mentally defective or aphasic or emotionally disturbed.2

The United States Department of Health, Education and Welfare recently reported that one out of every ten persons has some degree of hearing loss. In spite of efforts to control it, the number of individuals with hearing loss is increasing, in this country. Part of this is the result of an increase in the general population, but contributing factors are improved medical techniques and procedures. These improvements have resulted in saving the lives of children who would not have survived 30 years ago. As a result, however, hearing impairments are more frequently encountered in this group.


CHARACTERISTICS

The following items comprise a checklist that can be used by the school administrators as a screening device to identify children whose hearing is impaired. This checklist was provided by the Office of the State Superintendent of Public Instruction, Division of Special Education.

**Hearing Impaired**

1. Is there a history of hearing loss in his family? Yes No
2. Does the child appear to be inattentive most of the time? ___ ___
3. Does he appear to hear some things and not others? ___ ___
4. Does he have language and articulation problems which are immature for his age? ___ ___
5. Does he speak in either an extremely loud or extremely soft voice? ___ ___
6. Does he complain of earaches or running ears? ___ ___
7. Does the child attain consistently higher scores on performance sections of achievement tests than on the verbal and written sections? ___ ___

Affirmative responses to the above section indicate a need for further investigation and possible special educational provisions made.

Such symptoms as inattiveness, apparent dullness, tendency to fatigue or tendency to become confused sometime exhibited by the hearing impaired are not exclusive with them. Symptoms of greater significance include pain in a child's ear or mastoid bone, a tendency to turn his head more to one side than to the other when listening, ability to understand only when the speaker is close, tendency to omit sounds from his speech, and the ability to hear considerably more speech than he seems to understand.

Formal identification of the hearing impaired must be made by qualified professionals.

**CLASSROOMS FOR THE HARD-OF-HEARING**

A classroom for hard-of-hearing students should be large enough to accommodate the special equipment and teaching materials used in the instruction of such students. Much demonstration, dramatization, and movement are connected with the teaching of hard-of-hearing students, which makes adequate classroom space essential.

Classrooms built for groups of thirty pupils have found that all the space in such classrooms can be used advantageously in providing successful instruction for the smaller number of pupils enrolled in a class for hard-of-hearing children. Classrooms for hard-of-hearing students should have electrical outlets permitting convenient use of group hearing aids. Adequate lighting is essential, with a minimum of 50 feet-candles in classrooms where speech reading is required. The light should be of steady intensity, and glare and undesirable light reflections should be eliminated. The room should be designed so that no student has to look into the source of light when reading the lips of his teacher or classmates.

Classrooms for hard-of-hearing students should be located away from sources of noise. Since speech is composed of high and low freqencies of varying degrees of intensity students using residual hearing should have classrooms free from outside noises so that they may better hear the various components of speech. To ensure the best possible teaching/learning conditions, the floors should be carpeted to reduce noise. The ceilings and upper walls of the
classroom should be constructed of some type of sound conditioning material that will help to eliminate noise.

Elementary grade classrooms should be located on the first floor, so that the teacher may take her class on numerous short study trips outdoors. It should be possible to darken rooms quickly in order to use slides and short filmstrips in teaching. There should be a workbench and vise in the room as well as a sink and running water.

A site should be located so that a maximum attendance area can be served, and the site should be free of industrial or commercial noises, excessive traffic, or dangerous physical conditions.

There should be at least five square feet of bulletin board per child. There should be both fixed and/or portable cabinet storage to provide adequate space for materials for speech reading, speech training, vocabulary building, and other language development activities to be stored. The ceiling should be acoustically treated with appropriate sound absorption materials. There should be at least three linear feet of chalkboard per child. There should be a clock with a bell per room. There should be approximately five square feet of counter top per child. There should be a large mirror on a flexible mounting that will allow the hard-of-hearing students to see their own speech positions and articulation movements. Stands or frames should be available for hanging Plymouth charts, vowel and consonant charts, speech reading charts, vocabulary charts, daily experience charts and other essential instructional devices. Tools and materials for simple construction activities are needed.

A teacher of the hard-of-hearing usually uses more supplies per pupil and more kinds of supplies than a regular teacher uses; it is especially important for the teacher of the hard-of-hearing to have the supplies she needs to capitalize upon spontaneous learning situations.

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**Furniture and Equipment**

Amplification system — group, individual, or loop system (justification according to the specific problems of the students would be required for the expenditure for this much money.)

Aquarium — 15 gallon with heater, circulating pump, filter.

Autoharp

Barometer — wall

Battery recharger

Blocks — hollow instruction (set)

Blocks — solid instructional (set)

Cabinet — book — portable 30” x 50”

Cabinet, file — four-drawer with lock

Cabinet, paper storage — portable, to accommodate newspaper and chart paper

Cart, A-V adjustable

Chalkboard — portable, adjustable height

Ditto machine

Divider, room — movable (in lieu of built-in tutoring centers)

Easel

Encyclopedia

Flannel board

Globe

Kiln, electric 110V

Laboratory, reading language (SRA type)

Language master

Maps

Microscope

Mirror — portable, adjustable height, tilt angles. large

Models — eye, ear, human body

Phonograph — variable-speed, with speech speed included

Piano or organ

Plymouth chart

Projector, 8mm, 16mm, filmstrip-slide combination, opaqued and overhead

Puzzles and games, instructional

Rack, chart

Reader, controlled — calibrated speeds

Reading pacer — calibrated speeds

Rhythm instruments (set)

Science instructional equipment

Screen, projection — portable, wall or stand model

Shades or drapes

Slide viewer

Stand for butcher paper with tearing guides

Tables, activity, library, circular or tapequidal, fitted for clusters, typing

Tachistoscope

Tape recorder — variable speed with speech speed included

Television set — UHF, VHF, front speakers, outlet jack for use with amplification system

Tools, hand

Transparency maker

Typewriter — standard, primary type, pica type

Workbench — with vise and storage
Curriculum

The teacher of the hard-of-hearing should use all of the visual aids and materials which a good teacher of the deaf utilizes: real objects, pictures, books, chalkboard, etc. Even though most children will wear their own individual hearing aid there are many occasions when the aid is inoperative and a group hearing aid is needed. In addition a group hearing aid is indicated because of its superior fidelity and amplification and because it permits auditory stimulation of both ears.

For the maximum benefit from the group hearing aid it is essential that a room in which reverberation and internal and external room noises will be minimal be provided as a classroom for these children.

The teacher of the hard-of-hearing will need a tape recorder, a phonograph, and a language master, for effective auditory training. The tape recorder also can be used for recording samples of her pupil's speech to measure improvement. The school system may wish to purchase an auditory training unit.

In choosing any audio equipment for use with hearing impaired children, it is wise for the purchaser to obtain guidance from specialists. Two sources of this information are J. O'Neill, *The Hard of Hearing* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1964) and C. Hudgins, "Modern Hearing Aid Equipment" Volta Review, L.V. Direct inquiries can be made to any leading audiology center. One important reason for training the child to utilize his residual hearing is to help him to want to listen; therefore, equipment used must be of the highest quality so that it brings him the best hearing possible. A note of caution: What brings the teacher the best hearing possible may not necessarily bring the hard-of-hearing child the best hearing possible. The teacher must rely on what the child reports when he uses the aids.

In working with hard-of-hearing children and youth, the regular grade level curriculum can be followed. The major reason for the special placement of these students is to provide the opportunity for the development of a sound language foundation for each child. This foundation is the critical factor of success or failure for the hard-of-hearing during all school experiences.

A language foundation is developed with a strong emphasis on speech, speechreading (for some children), reading, writing, and auditory training. The emphasis on language development must continue as knowledge, skills, and attitudes are pursued in the various elementary subject disciplines. It is highly important to organize and plan instruction so that the development of language and the acquisition of subject matter support or complement each other.

Speech correction may also be an essential part of the program for these children. Because of the language deficit of these children teachers must structure their programs to the needs of the individual student.

By the early initiation of a special educational program, the effect of sound deprivation can be minimized and to a degree overcome.

The degree of expertise of the teacher in the areas of testing and diagnoses will dictate the amount and kind of testing to be done in the area of language.

The following is a list of tests and references which she might wish to use.

Language Measurement


LANGUAGE

The most important basic skill for the hard-of-hearing child is the acquisition of language. Lassman has said that "language is the keystone upon which successful education of the deaf ultimately rests." This is also true for the hard-of-hearing. The curriculum for the hard-of-hearing, regardless of their age, ability, or grade level, must have language development as its core. This is true whether the educational experience is mathematics, social science, or even a school assembly. Inherent in educating hard-of-hearing children is the utilization of all experiences to develop and reinforce language growth. Formalized courses of study used with the deaf may be adapted for use with the hard-of-hearing.

The following is a quote from the revised edition of Hearing and Deafness.

The child's progress in acquiring language will be governed only by the extent to which the teacher uses her own ingenuity, flexibility, and knowledge of how children grow and develop. Perhaps she may find some help in the following guides to practice:

1. Language teaching should be related to significant and meaningful experiences of the children.
2. Language should constantly be made to serve a purpose for the child.
3. All sensory channels should be used to teach language.
4. Teachers need to be alert to the ideas that are developing in children so that they may provide the children with language with which to express themselves.
5. Children need many varied contacts with the same language in order to make it theirs.
6. Many children need formal, systematic aids to the acquisition of language. Many shun language when they feel insecure in its use.
7. Schools and homes should create an atmosphere where language is used and where books are read regularly.

One of the well-known approaches to language instruction is the grammatical approach known as the Fitzgerald Key. Fitzgerald developed several plates or charts bearing her outline of guide words and symbols. In the early lessons the guide words "whose," "who," and "what" help the child to identify and fill in the subject. A symbol then indicates where to place the verb, which is followed by the guide words "what" and "whom" to lead the child to identify and fill in the object if one exists. This and other plates provide aids for more complicated sentences. The Fitzgerald system gained favor among some because of its flexibility and the fact that it is intended to supplement rather than replace the natural method of language instruction.

The following is a list of references which may be helpful in the development of language for these children.

**Language Education and Therapy**


Goertzen, Don, Ruidl, Phil, Walter, Don, et al., Continuous Growth in Reading. Seattle Public Schools Tri-School Summer Elementary Nongraded Committee, 1968.

The Toy Book
My House Book
Baby Animal Book
The Truck and Bus Book


Guideposts to the English Language Arts. A course of study.
for teaching the English Language Arts in Elementary,
Junior High, and Senior High. Seattle: Seattle Public
Schools, 1962.

Haas, Dorothy, Maria: Everybody Has a Name. Racine,

Heilman, Arthur W., Phonics in Proper Perspective. Colum-

Hilt, Mary L., Let Me See. Racine, Wisconsin: Whitman

Johnson, Doris J., and Myklebust, Helmer P., Learning Dis-
abilities: Educational Principles and Practices. New York:

Karnes, Merle B., Helping Young Children Develop Language
Exceptional Children, 1968.


Kephart, Newell C., Learning Disability: An Educational
Adventure. West Lafayette, Indiana: Kappa Delta Pi Press,
1968.

Kramon, Florence, Eugene and His Friends—Rhymes for

Martin, Bill, Jr., Sounds of Language Readers. New York:

McClung, Betty J. Beranek, et al., Something to Say: All
Through the Day. Danville, Illinois: The Interstate Printers

McCracken, Glenn, and Walcutt, Charles C., Basic Reading.

McKee, Paul, and Harrison, M. Lucille, Getting Ready to

McKee, Paul, and Harrison, M. Lucille, Let's Talk. Houghton
Mifflin Company, 1942.

Monroe, Marion, and Greet, W., Cabell, My Little Piction-
ary. Palo Alto, California: Scott, Foresman and Company,
1962.

Nunan, Desmond J., Composition: Models and Exercises, 7

Ottedal, Laura, and Jacob, Nina, My First Dictionary. The
Beginner's Picture Word Book. New York:

Pennington, R. Corbin, James Elizabeth, For the Parents of
a Child Whose Speech is Delayed. Danville, Illinois: The

Phonics Program of the Sheldon Basic Reading Series. Bos-
ton: Allyn & Bacon, Inc.

Platts, Mary E., et al., Spice. Benton Harbor, Michigan:

Pratt, Marjorie, and Meighan, Mary, Fun For You. Chicago:

Reader’s Digest Reading Skill Builder. Pleasantville, New

Russell, David H., and Karp, Etta E., Reading Aids Through
the Grades. New York: Teachers College Press, Columbia
University, 1967.

Sayre, Joan M., Helping the Child to Listen and Talk. Dan-

Slingerland, Beth H., Some Prerequisites for Beginning Read-
ing. Cambridge, Massachusetts: Educational Publishers Ser-
vice, Inc.

Tresselt, Rain, Drop, Splash. New York: Lathrop, Lee &
Shepard Company.

Theoretical Approach to the Diagnosis and Treatment of
Language Disorders in Children. San Antonio, Texas: Harry
Jersig Speech and Hearing Center, Our Lady of the Lake
College, 1968.

Utley, Jean, What's Its Name? A Guide to Speech and Hear-
ing Development. Urbana, Illinois: University of Illinois

Walpole, Ellen Wales, The Golden Dictionary. New York:
The Golden Press.

Word Recognition Program. New York: Ginn and Company,
1955.

**Lipreading**

A number of methods for the teaching of lipreading
have been devised. The teacher of the hard-of-hearing un-
doubtedly will have his or her particular choice. Since these
methods were developed in the 1930's and 40's, the
original material is quite out of date. The teacher might
find the following list of literature and materials helpful.

Board of Education of the City of New York, Bureau of
Curriculum Research. Lipreading for the Deaf and Hard-of-
Hearing. New York Curriculum Center, 130 West 55th
Street.

Times Educational Services, 1968.

Frostig, Marianne, and Horne, David, The Frostig Program
for the Development of Visual Perception. Chicago: Follett

Karnes, Merle B., Helping Young Children Develop Language
Exceptional Children, 1968.
Auditory Training

Every hard-of-hearing child should be taught to use as much of his residual hearing as possible. If this is to be accomplished auditory training should begin at the earliest possible date. Johnson (1948) found that the hard of hearing children with the least experience in the use of hearing and speech were the most retarded in reading. Johnson also stated that large amounts of residual hearing appeared to be of no real value to them for interpreting speech unless they had been given the proper auditory experience backgrounds. Auditory training should systematically develop the child's discrimination of (1) gross sounds, (2) rhythm patterns of speech and music, (3) the vowels, (4) the consonants, and (5) speech in noisy situations.

Phonograph records specifically designed for auditory training are available and can be used effectively. Lists of such records can be obtained from Volta or ASHA. Publishing houses are now marketing much material in this area. The following is a list of items that the teacher may wish to evaluate for her program.

AUDITORY TRAINING

Evans, Ruth, Childhood Rhythms. Rhythm Series for Kindergarten through Grade 6.
James, Phoebe, Rhythm Series for Kindergarten through Grade 6.
Slingerland, Beth H., Some Prerequisites for Beginning Reading. Cambridge: Educational Publishers Service, Inc.
Speech

The teacher should evaluate the speech of her students in terms of its articulation and the quality, pitch, and melody of his voice. The procedures used in speech correction with normally hearing children can be used with only slight adaptations to meet the particular needs of hearing impaired children. The material used for speech correction must include attractive motivational devices so that the student will want to develop new speech habits. The following is a list of materials and references that are currently being used.

SPEECH

Parent Education

Parents who suspect their child of suffering from a hearing impairment or wish further information concerning their child’s hearing condition should be referred to an otologist and/or the School for the Deaf in Indianapolis, the speech and hearing centers located at Ball State University, Muncie; at Indiana University, Bloomington; at Indiana University Medical Center, Indianapolis; at Indiana State University, Terre Haute, or at Purdue University, Lafayette. At any of these centers, parents can secure an examination by an audiologist skilled in the assessment and diagnosis of hearing losses. These audiologists can make referrals to authorized hearing aid dealers.

Bibliography

A Beginner’s Speech Book, St. John’s School for the Deaf, 3680 S. Kinnickinnic Avenue, Milwaukee, Wisconsin, 1959.
A Child Doesn’t Hear. Cleveland, Ohio: Cleveland Junior Chamber of Commerce.
A Child Doesn’t Talk. Cleveland, Ohio: Cleveland Junior Chamber of Commerce.
Lane, Paul F. and Mary E. Gipe, The First Sound Bank Series. Sutherland Printing Company, 11 S. 4th Street, Montezuma, Iowa.
John Tracy Clinic Correspondence Course for Parents of Deaf Children. John Tracy Clinic, Los Angeles, California.

McLaughlin, Harriet F., Auditory Training: Design for Growth. City of New York Board of Education.


Speech Master Cards. Wolfe of Sheboygan, Manufacturers, 1225 N. 8th Street, Sheboygan, Wisconsin.


The parent should be guided by the teacher in selecting those books which apply to his child's specific problem.

Periodicals

Periodicals which may contain articles and other information concerning hard-of-hearing children are:

Journal of Speech and Hearing Disorders
ASHA American Speech and Hearing Association
9030 Old Georgetown Road
Washington, D. C. 20014

American Annals of the Deaf
Gallaudet College
Washington, D. C. 20002

Exceptional Children
Council of Exceptional Children, NEA
1201 Sixteenth Street, N. W.
Washington, D. C. 20006

Volta Review
Alexander Graham Bell Association for the Deaf, Inc.
1537 - 35th Street
Washington, D. C. 20007

The Hoosier
Indiana School for the Deaf
Indianapolis, Indiana

Captioned films may be secured through: Captioned Films Office, Indiana School for the Deaf, 1200 E. 42nd Street, Indianapolis, Indiana 46205.

A list of suggested recordings may be secured from: The Volta Bureau, Washington, D. C.

Other resources are:
Supervisors, Programs for the Deaf and Hard of Hearing
401 State House
Indianapolis, Indiana 46204

Administrators of Special Education in Public School Corporations.

If the teacher feels the need for a curriculum in each of the subject matter areas, she can write to any of the schools for the deaf (there is one in each state) for their guides. An excellent one which the writer has had an opportunity to study is the series of guides published by the Clarke School for the Deaf, Northampton, Massachusetts, 1969. One word of caution however, is this curricula should be used consecutively from the time the child enters school until completion of high school.
A LINGUISTIC APPROACH TO TEACHING HEARING IMPAIRED CHILDREN
Implications for the Classroom Teacher
Jean S. Moog
Central Institute for the Deaf
St. Louis, Missouri

I intend to first present briefly the basic philosophy upon which our approach to teaching language is based. I will then discuss four principles involved in this teaching. This will be followed by a description of the application of these principles to a teaching situation. Finally, I will discuss the use of repetition and variety in subsequent language teaching.

BASIC ASSUMPTIONS
Our approach to teaching language to hearing impaired children rests on two basic beliefs. The first concerns the nature of human beings. We agree with the linguists who say that the human mind is endowed with a unique ability to learn language. We, too, believe that somehow the human mind is able to take in that whole confusing mess we call “language” and to make sense out of it. As the language principles are sorted out, the system is learned. This capacity for learning language is possessed by all human beings regardless of their hearing ability. Therefore, hearing impaired children also have this capacity for deciphering the language code if they are presented with enough meaningful language samples, beginning with simple forms and gradually progressing to more complex language. Part of our teaching procedure at Central Institute for the Deaf is to provide many samples of language to these children.

The second assumption we make concerns the nature of language. Because language is so complex, we believe it must be dealt with as a whole from the very beginning. We could begin by teaching only one aspect of the language, let us say phonology. We could have the child concentrate on the sounds of the language, the individual phonemes, and then build up words, phoneme by phoneme, and go on to build up sentences word by word, etc. In this way the child could gradually build the language bit by bit, moving from the simpler part to the more complex whole. At first this may seem an advantageous way to approach language learning. However, the nature of language, precisely because it is so complex, must be dealt with as a whole.

It is easier for the child to tackle the whole complexity called “LANGUAGE” and decipher it, than to study the various aspects separately and attempt to put the parts together to artificially create language. It is only in relation to the whole that the various aspects of language have meaning. The purpose of language is to express ideas, desires, needs. Usually the effect is getting someone to react to this expression. Therefore, from the beginning we deal with language as a whole and use language for the purpose of communicating. We teach the child what language is, what it can do for him, how he can use it to manipulate his environment.

PRINCIPLES OF TEACHING TECHNIQUES
1) GETTING THE CHILD TUNED IN TO THE COMMUNICATION ACT
The first step in teaching language to hearing impaired children is to get the child tuned in to the communication act. The child must be taught to watch the speaker’s lips. He must be taught to listen to the auditory pattern of the speaker. When he has tuned in to listen and look, then he can be taught to imitate the speaker’s speech pattern. However, because listening, looking and imitating are closely interrelated parts of the total communication act, they need not be taught separately. Usually they are learned almost simultaneously or at least evidence of learning is given simultaneously.

2) GETTING THE TEACHER TUNED IN TO THE CHILD
Getting the child tuned in to the communication act is greatly dependent on getting the teacher tuned in to the child and what the child desires to communicate. These two are so closely related that it is difficult to determine which comes first. It is probably only when both are operating simultaneously that the child really understands what language is all about, what purpose communication serves.

All children have a desire to communicate and it is up to the teacher to find out what the child wishes to say and put language to it. The teacher must determine in any way she can what the child may want to communicate about and then supply the language for that idea or for that need.

3) EXPANSION AND IMITATION
When the child attempts to communicate something, the teacher figures out what he is trying to say and then gives him the language to say it. In this way the teacher expands the child’s communication attempt into grammatical language. The child is required to imitate the pattern at
whatever level he is capable. The expansion helps to provide the child with the variety of language essential to his being able to induce language principles. The expansion also exposes the child to a level of language above the level he is using. In this way the child is moved from less complex to more complex as well as being given flexibility in his use of language. The imitation provides assurance to the teacher and reinforcement to the child. Imitation forces the language presented “through” the child and greatly increases the chances of that language being absorbed in some way by the child. The child, using the information gained from the expansion-imitation procedures, is somehow eventually able to abstract the structural language principles necessary to understanding language and necessary to being capable of creating new language.

4) TEACHING MATERIALS DERIVED FROM THE ABOVE

The teacher gets the child tuned in to the communication act by attaching language to what the child wants to say. Then the teacher gets the child to imitate the speech pattern for what he wanted to say. Some of this language can then be put into written form and used as material for language lessons providing the necessary repetition for learning language. This written language can take many forms, two of which are experience chart stories and single sentence cards. (SHOW SAMPLES) Sometimes the language is derived from contrived experiences and sometimes it grows out of incidental happenings in the classroom. Sometimes it is language that the children use for social interaction and sometimes it is the language of games. Sometimes it relates to art or science activities and sometimes to various kinds of dramatic play. In all cases it is based on experiences that are real and meaningful to the children.

I have briefly described four principles underlying our teaching procedure. The methods of applying these principles to a specific teaching situation are determined by the child’s age, the child’s ability and the child’s level of language competence at the time. Consider the following hypothetical situation of a beginning child in our program as an example of a possible application of the four principles just discussed.

Situation: Milk and cookies are being served.

Child: Four years old—does not watch the speaker’s lips, does not vocalize and gives no indication of hearing the speaker’s voice. (The child is not tuned in to the communication act.)

Teacher: Is pouring milk.

Possible approach: Teacher has pitcher of milk and child indicates he wants some. He may gesture or scream or use any means at his disposal to indicate to Teacher that he wants some milk. T. waits until child’s eyes focus on T’s face. They will eventually because he will be looking for some indication of whether or not he is going to get what he wants. At that moment T. must be ready to give the language “MILK” or “I want some milk” or “Give me some milk.” Then T. must attempt to get the child to imitate this language at whatever level he is capable. Later T. can write on a card “Johnny drank some milk” or “Johnny wanted more milk” or “Johnny likes milk,” etc.

All of this probably will not happen the first time milk and cookies are served. Getting these procedures established often takes weeks, even months, but let us analyze what actually happened. First the teacher is creating a situation (milk is being served) in which the child has a desire to communicate and the teacher is tuned in to what the child wants to communicate (that he wants milk). The teacher uses this situation to force the child to tune in to the communication act. She makes it worth the child’s while to tune in. Watching the speaker’s lips, listening to the pattern and attempting to imitate the pattern benefits the child. It gets him what he wants. He gets the milk. Not only does it get him what he wants but it becomes the only way he can get what he wants. The teacher sees to it that other means of communication cease to be effective for him. The written form reinforces his learning. He is interested in it because it is language he understands and language which he uses or wants to use.

At first just getting the child’s eyes to focus on the speaker’s lips may be a sufficient accomplishment. Soon he will learn that his eyes must look at the lips before the teacher will pour the milk. The task can be accomplished more quickly if the teacher pours small amounts of milk so that in a single snack period there are several opportunities to reinforce the act of watching the teacher’s lips. Every time the teacher passes things out to the children, this procedure can be repeated. The teacher must arrange many opportunities to reinforce this idea. As soon as possible the teacher must try to get the child to imitate the verbal pattern. Gradually the teacher will move the child towards closer and closer approximation of the language pattern given.

If food is not an area in which the teacher is receiving a satisfactory response for a particular child, then the teacher must find a more meaningful situation. Teacher may have a child who does not like milk or cookies or eats a big breakfast and isn’t interested in food at school. All is not lost for such a child. The teacher must be inventive and creative in finding a way to the child. The child may appear to be interested in absolutely nothing. The teacher must observe this child closely. He will give himself away. He may like to swing and the teacher can get him to say “Push me.” If he likes to draw, the teacher can get him to say “Paper” or “I want some paper.” If he likes to jump, get him to say “Jump” or “I like to jump” or “Let me jump” before letting him jump off a chair or over a block. If he likes to play catch, he can say “Ball” or “Throw the ball.” Somehow the teacher must find the way to the child. The teacher must get tuned in to something the child wants to say if she hopes to get the child tuned in to the communication act.

Once the general idea of a communication act is put
across, the teaching of new language becomes much easier. Once the child understands what language is all about and is able to participate in the imitation and expansion procedures described above, he has begun to learn language. This is just the beginning. It then becomes the task of the teacher to decide what new language the child is ready for and when he is ready and then to put that language to the child’s ideas.

SUBSEQUENT LANGUAGE TEACHING

At this stage there are two essentials—repetition and variety. The written material such as charts and sentence cards provide one kind of repetition, the repetition of particular sentences such as in the sentence card “Lisa wanted more milk.” The child can practice this particular sentence over a period of time and such practice provides one kind of repetition.

For this kind of repetition the teacher might use an experience chart story. One method might be as follows:

**T.** gives one of the sentences of the story.

“Eric put 2 feathers on his hat.”

The child finds the sentence and says it, usually using only the key message carrying words, possibly because they are words of greater acoustic power.

“Eric feathers hat.”

The teacher breaks the sentence into smaller units so that the child is able to say all parts including the function words which are likely to have been omitted in the first imitation.

“Eric put 2 feathers on his hat.”

“Eric put 2 feathers on his hat.”

In breaking the sentence, thought units should be kept together, but the length of the unit will depend on the ability of the child. The teacher can break the sentence into units as small as is necessary in order to get all the parts processed. Then the teacher repeats the whole sentence again so that the child is exposed to the whole sentence as well as to its separate parts.

With increased practice more and more of the sentence is included in the child’s production.

In this way the child gradually becomes aware of all the words necessary to express his idea accurately. As the child becomes aware of these smaller words, which generally are of low acoustic power, he has the opportunity of learning their importance to the meaning of the sentence and gradually begins using them appropriately when creating sentences of his own.

In addition the teacher sees to it that vocabulary and syntactical structures get repeated from day to day in a variety of sentences. She does this through the language she attaches to contrived situations, to incidental happenings, to all activities in the classroom.

For instance, on Monday teacher may present:

“After Eric tied his shoes, he went to gym”

and on Tuesday

“After we finished our snack, we went out to play.”

and on Wednesday

“After David poured the lemonade, Beth passed around the cookies.”

All are examples of the same syntactical structure being repeated from day to day over a period of time.

New vocabulary and expressions get repeated from day to day in much the same way and by the same conscious effort on the part of the teacher. For example:

“It’s almost time for recess.”

“The cup is almost full.”

“We are almost finished.”

Equally important as repetition is variety. The teacher consciously attempts to provide variety both in vocabulary and in syntactical structure. The variety that is provided is spread over time from day to day, from week to week, and from month to month. The teacher consciously provides a number of kinds of variety.

1) Each noun should be used with a variety of verbs.

e.g. Lisa bounced the ball.

Lisa threw the ball.

Lisa kicked the ball.

Lisa caught the ball.

Lisa rolled the ball.

Lisa found the ball.

e tc.

2) Each verb should be used with a variety of subjects and objects.

e.g. The boy opened the door.

The girl opened her letter.

David opened the window.

Robin opened her present.

The children opened their lunch.

e tc.

3) The syntactical structure of the sentence should be varied.

e.g. Throw the ball.

Scott threw the ball.

The ball was thrown high.

The boy can throw fast.

Katherine likes to throw.

Throwing balls is fun.

If you throw the ball, I’ll catch it.

After he threw the ball, he fell.

e tc.

4) A variety of verb forms should be used.

e.g. He throws.

He is throwing.

He can throw.

He threw.

He was throwing.

He has thrown.

He could have thrown.

He had been throwing.

He could have been throwing.

e tc.
The teacher does not attempt to fully teach one noun, verb or syntactical structure in a variety of ways before moving to another. For example, she does not teach bounce the ball, kick the ball, throw the ball, etc. before introducing some other noun. However, once the child knows "ball," she attempts in the following weeks to find or to make occasions to use "ball" with a variety of verbs. During the same period of time she will also attempt to find a variety of nouns to be used with the variety of verbs—-throw, kick, roll, etc. She uses familiar nouns with unfamiliar verbs and familiar verbs with unfamiliar nouns and familiar vocabulary when introducing new syntactical structures.

In the beginning the teacher uses simple sentence structures and as the children gain competence she moves to more complex language. As the teacher expands the simple sentences to more complex language another kind of variety is apparent. The teacher provides a variety of ways to express the same idea. Example: If the child says "It is warm. I did not wear a coat." (two simple sentences), the teacher will give more complex language for the same idea. She might say any of the following:

"It was so warm that Eric did not need a coat."
"It was warm enough to go without a coat."
"Robin wore a sweater instead of a coat because it was warm."
"When it is warm, we do not need to wear coats."
"It was too warm to wear a coat."
"It was warm so David went outside without a coat."
"Since it was warm, Lisa did not need a coat."

If the child spontaneously expresses the idea one way, the teacher rephrases the sentence. In this way, the child learns there are many ways of expressing the same idea. The teacher consciously tries to move the child to the next level of language competence. New syntactical structures are used to express his idea and these new syntactical structures are being used with familiar vocabulary.

The teacher is aware of the wide variety of language that must be presented. She is also cognizant of the fact that this variety must be presented over a long period of time—weeks, months, even years.

This variety of language gets presented throughout the days and weeks when talking to the children, when rephrasing the language of the children, when attaching language to the children's ideas, when developing experience stories, when telling stories, when playing games, when carrying on all class activities.

Both variety and repetition are essential to teaching language. The variety is necessary in order to provide the opportunity for inducing the language principles and the repetition is necessary to insure learning.

The procedures described earlier continue to be applied to all subsequent language learning. The teacher continues to put language to what the child wants to say and continues to expand and to put into grammatical form what the child actually says. The child imitates the teacher's pattern. The teacher contrives a variety of situations in order to create a need for a variety of language and for repetition of language. A great deal of this language gets put into written form and becomes the material of more formal language lessons.

In addition, language is also presented through stories, books, action rhymes, games, pictures, film strips, etc. The techniques and materials that can be used for teaching language are limitless. However, the basic principles described apply to all language teaching regardless of the specific materials used. The materials are the surface, the media which give form to the basic principles.

**SUMMARY**

Our approach to teaching language is based on the concept that language must be encountered as a complex whole from the very beginning. This is an advantageous way for human beings to approach the study of language because they have an innate capacity for dealing with the whole complexity of language and somehow deciphering the language code. I have tried to show how four principles of teaching can be applied to a particular beginning teaching situation. The four principles involved were:

1) Getting the child tuned in to the language act.
2) Getting the teacher tuned in to the child's communication desires.
3) The technique of imitation and expansion.
4) Deriving language lesson materials from meaningful experiences of the child and using the child's communication attempts as the basis of the language to be taught.

I have also pointed out the necessity of both repetition and variety in the language being presented. Variety is necessary in vocabulary, word forms and syntactical structures in order to provide opportunity for inducing language principles and to provide for flexibility of language. Repetition is necessary in order to insure learning. These are some of the principles involved in our approach to teaching language to young hearing impaired children at Central Institute for the Deaf.