

DOCUMENT RESUME

ED 046 151

EC 031 027

AUTHOR Pronovost, Wilbert; And Others
TITLE Educational Evaluation and Programming for Children
with Auditory Disorders.
INSTITUTION Boston Univ., Mass. School of Education.
SPONS AGENCY Bureau of Elementary and Secondary Education
(DHEW/OE), Washington, D.C.
PUB DATE Jul 70
NOTE 109p.
EDRS PRICE MF-\$0.65 PC-\$6.58
DESCRIPTORS Auditory Training, *Aurally Handicapped, Evaluation
Methods, *Exceptional Child Research, *Program
Evaluation

ABSTRACT

The report is concerned with the activities of a 2 year pilot project of an educational evaluation and programming unit for children with auditory disorders. The educational evaluation process, the programs and problems of implementation, dissemination, other project activities and an evaluation of the project are discussed. Appendixes cover such areas as staff, facilities and equipment, tabulations of data on children, and questionnaires for an evaluation of the project. (OD)

ED046151

EDUCATIONAL EVALUATION AND PROGRAMMING for CHILDREN WITH AUDITORY DISORDERS

THE HORACE MANN TITLE III PROJECT

Final Report 1967-1970

A cooperative project of the Boston Public Schools and Boston University under a grant from the United States Department of Health, Education and Welfare, Title III of PL 89-10, Elementary and Secondary Education Act of 1965, Project Number 67-4123.

EC 031 027e

EDUCATIONAL EVALUATION AND PROGRAMMING
for
CHILDREN WITH AUDITORY DISORDERS

The Horace Mann Title III Project
Report of a Three-Year Project
1967-70

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE
PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR
STATES DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION
POSITION OR POLICY.

This report was prepared in July, 1970, by

Wilbert Pronevest, Project Director
Tanya M. White, Coordinator of Clinical Services
Nancy Miller, Audiologist
Sharon Smith, Clinical Teacher
Edward Herbert, Consulting Psychologist
Norah Preston, Nurse
Loana Hoylman, Secretary

TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
II. OBJECTIVES	2
III. THE EDUCATIONAL EVALUATION PROCESS	3
IV. PROGRAMS AND PROBLEMS OF IMPLEMENTATION	29
V. OTHER PROJECT ACTIVITIES	48
VI. DISSEMINATION	71
VII. EVALUATION OF THE PROJECT	73
VIII. SUMMARY	81
IX. APPENDICES	
A. STAFF	36
B. FACILITIES AND EQUIPMENT	68
C. TABULATIONS OF DATA ON CHILDREN	24
D. QUESTIONNAIRES FOR EVALUATION OF PROJECT	101

LIST OF ILLUSTRATIONS

	Page
1. Individual Evaluation and Tutoring	6
2. Audiological Testing and Observation	11
3. Evaluation Nursery	21
4. Educational Programming for Deaf Retarded	33
5. Summer Adolescent Program	64
6. Adult Education Program	67
7. Innovative Furniture	91

I. INTRODUCTION

This report is concerned with the activities of a pilot operation of an educational evaluation and programming unit for children with auditory disorders, conducted in conjunction with continued planning of a new comprehensive center for children with communicative disorders. The pilot project was preceded by a one year planning project in which the educational specifications for the new complex were developed. The pilot project focused on one unit of the new complex -- educational evaluation and programming. During the three years of the pilot project, other activities were conducted including continued planning of the new complex in conjunction with a new elementary school for the normally hearing, an expanded program of adult education for the deaf in cooperation with the Speech and Hearing Foundation of Massachusetts and a national Symposium on Deafness in conjunction with the centennial celebrations of the Horace Mann School for the Deaf and Boston University.

II. OBJECTIVES

The objectives of the project, stated in the original proposal, were:

- A. To provide comprehensive educational evaluation of children with known or suspected auditory dysfunction who are not achieving at the level of their educational potential, or for whom educational placement had not been determined.
- B. To provide trial educational programming as a basis for determining a child's patterns of learning and the most appropriate educational procedures to meet the child's educational needs.
- C. To provide ongoing contact with the educational setting in which a child is placed, through teacher consultations and demonstrations of teaching procedures so that the educational setting can meet the child's individual needs.
- D. To provide periodic re-evaluations to determine the efficacy of the recommendations and to suggest modifications of educational procedures as indicated by the re-evaluations.
- E. To provide individualized educational services in selected cases where these services are not available in existing programs.
- F. To provide demonstrations of new special class organizations and procedures for groups of children for whom current classroom organizational patterns are inappropriate; i.e. -- class for hard of hearing; class for multiply handicapped.
- G. To evaluate the results of the pilot project with newly developed data-coding techniques as a basis for recommending future educational programs which should be developed in schools and centers for the hearing handicapped.

III. THE EDUCATIONAL EVALUATION PROCESS

The evaluation process was designed to provide comprehensive assessment of a child's functioning in the cognitive, communicative and affective aspects of his behavior. The children referred for evaluation were those with known or suspected hearing impairments who were presenting problems in the educational setting in which they were enrolled. There were some, also, who were not in school and were evaluated for admission to the Horace Mann School for the Deaf, or for advice on other appropriate placements.

A substantial proportion of the children referred for evaluation had multiple problems. In traditional terminology, they would be classified as multiply-handicapped, with a tendency to describe them according to primary and secondary disabilities, such as deafness, learning disabilities, emotional disturbances, environmental deprivation, mental retardation, physical handicap, and neurological impairment. However, traditional classifications were inappropriate because of the complexity and diversity of the combined handicaps. A child who is deaf and retarded has difficulty being educated as a deaf retardate or as a retarded deaf child because traditional programs for the retarded are ill-prepared to deal with deafness as much as most programs for the deaf are ill-prepared to deal with the educable retardate. Similarly, programs for the deaf or for the emotionally disturbed are ill-prepared to provide for a disturbed deaf child or a deaf disturbed child.

A child's functioning, in relation to the contributing multiple disabilities, is still that of a single child who behaves as an individual, reacting in a complex variety of ways to the multiple factors of his personality, physical condition, and environment. Therefore, the philosophy and thrust of the educational evaluation was to describe the child's cognitive, communicative, and affective behavior as a basis for recommending appropriate educational programs rather than to "diagnose" specific disabilities or "label" his "primary" or "secondary" handicaps.

Members of an interprofessional team participated together in the evaluation of a child. Team members included a clinical teacher of the deaf skilled in psychological assessment as well, a school nurse with considerable hospital experience, an audiologist who was formerly a teacher of the deaf, consulting clinical psychologists experienced with retarded and disturbed children, a coordinator of clinical services experienced in parent interviewing and administrative procedures, and for the second year of the project only, a clinical teacher for language disabilities. Team members shared responsibilities for formal and informal testing, observations, parent interviews, and conferences with teachers. When possible, observations were made in the child's classroom. Staff conferences were held often, sometimes informally, to share impressions of the child. Staffing sessions at the conclusions of the evaluation included the child's present and future teachers whenever possible. Parent conferences were held as often as necessary during the evaluation process to obtain information and clinical impressions. Parent conferences also occurred at the end of the evaluation process to interpret findings and recommendations to the parents. The

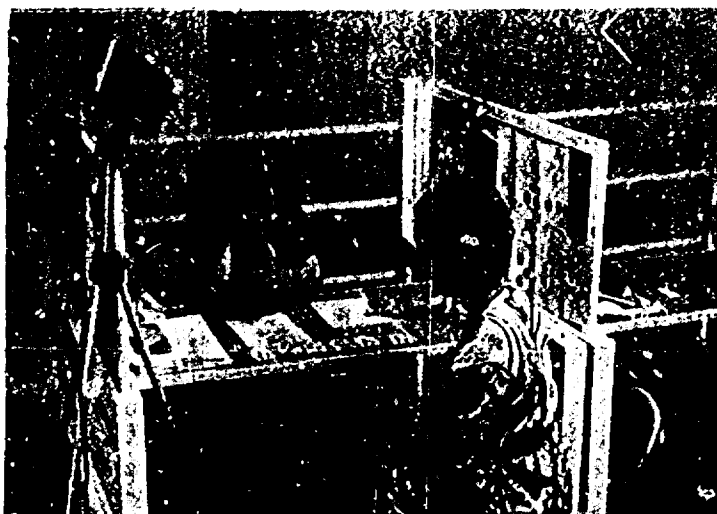
evaluation period usually involved several sessions over one or two weeks, and sometimes over a longer period of time, continuing until the evaluation team felt it had sufficient information to make recommendations for educational programming and/or placement.

The renovated facilities used for the evaluation were designed to enhance the philosophy of the evaluation process. The parent and child entered an informal lounge area of a large room which contained an especially designed individual testing-tutoring booth, an audiological suite, and a psychological assessment room. An adjacent large room was equipped with individual testing-tutoring booths and especially designed study desks in an educational programming area. Closed circuit television and video-taping equipment were available for staff members to observe the child with other personnel or to view evaluation sessions during staff conferences, although most observations of other staff members with children were done in the same room.

Developmental levels of the child were secured during the evaluation in order to create a complete profile which, hopefully, could be matched with an academic milieu most appropriate for the future development of the child. While the focus was upon the child's formal education, other areas of his development were observed and evaluated. The child's intellectual ability, his social maturity, his perceptual level, his physical coordination and dexterity, and his cognitive style (including his method of approach, the level of complexity of functioning, his reaction to success, failure, frustration, etc., and his span of attention) were considered. Inconsistencies with the expected norms in these areas, as determined by his chronological age, were then interpreted in relation to the degree of physical handicaps he possessed,



Individual
Tutoring
Booth



Study Desk
with
Teacher Assisting

and also in relation to any other cultural or social approaches to be used in the child's present classroom, or for a different educational placement if such seemed more appropriate.

Testing and observation of the child were the main means for accomplishing the end discussed above. Observation was comprehensive, for it not only took into account the immediate behavior of the child as seen in the testing situation but included teacher's reports, parent's statements, medical records and any other observational reports available. First hand observations of the child's behavior were evaluated in the light of this ancillary information as to its representative quality.

Intellectual levels were derived with the use of accepted tests. However, since these tests were designed for and norms established on a normal population, the formal use of most of these instruments was prohibited. Yet a fairly accurate level of intellectual functioning could be ascertained by means of a battery of these tests, or parts of these which were applicable. Cross confirmation of the various instruments suggested the reliability of the level secured. For example, a child who is handicapped by a severe or profound hearing loss and is devoid of speech could be subjected to the performance section (or parts) of the Wechsler Intelligence Scale for Children (34) and a partial Intelligence Quotient or Mental Age could be obtained. Its validity then could be challenged by administration and appropriate scoring of the Goodenough Draw a Person Test (12), the Bender Gestalt Test of Visual-Motor Perception (4, 16, 20, 26) or other instruments which lend themselves to establishment of mental ages. These latter tests can also be a source of further information regarding either

aspects of the child's development, viz., perceptual, emotional, social, etc. During their administration, fine motor coordination and visual perception of form might be assessed. The youngster's degree of integrative thinking through his approach to tasks could in part be determined. Cognitive abilities such as sequencing ability, ability to sort and categorize, and ability to solve mechanical problems could be investigated.

Despite the lack of materials specifically designed for use in evaluations of the deaf or otherwise hearing impaired, the staff of the evaluation unit was able to develop a procedure of evaluation which was applicable for each child and could easily be adapted and expanded to his specific needs. A variety of formal and informal testing materials was used in attempting to assess each area of functioning. On occasion, it was necessary to adapt standardized procedures, but at all times, care was taken in interpretation of test results. Considerable emphasis was placed on information derived from informal observations, including the youngster's degree of participation, his thinking ability, and approach to problems as displayed in play or testing situations with other children.

Formal scores were rarely stated in evaluation reports. In most cases, the reliability of the results obtained through formal and informal assessment was judged to be good. The interpretation of the results following the culmination of the evaluation sessions was contributed by all members of the team. The following is a description of the process in terms of the areas which were investigated.

Fine and gross motor coordination were evaluated informally. The schedule of motor development designed by Bayley and Oseretsky and

described by Myklebust (23) proved helpful here, as all tasks could be carried out without verbal instructions in a non-pressuring situation. Dominance was checked by observation of preferential use of hand, foot, and eye during participation in simple games and exercise routines. The child's ability to use a pencil, the presence of tremors, and eye-hand coordination were observed and subjectively evaluated in terms of the child's general orientation. Special attention was given to a youngster's balance in an unrestricted situation. The child's ability to follow directions, recall them for a period of time and sequence common tasks were observed in this portion of the evaluation.

A formal evaluation of visual perception and visual motor functioning focused on the child's visual abilities as they relate to a learning situation. Within this area of the evaluation, every possible visual ability was studied. This was not limited to visual discrimination, but also included those integrative and associative abilities depending in part on the visual modality. The sum of these abilities viewed as a whole gave some indication of a youngster's academic strengths and weaknesses.

Various tests of visual perception are administered, depending on a youngster's chronological and/or mental age, his level of cognitive functioning and his educational status. A child might be required to match geometric forms or colors; to copy similar designs or to trace forms and letters. Testing sometimes extended to having a child sequence materials of various sizes, discriminate similarities and differences and copy letters, words, and phrases.

Short and long term visual memory was assessed for each child as it evidenced itself in the various learning situations. Attempts

were made to assess a youngster's capabilities requiring visual perception and visual association. Certain subtests of the Illinois Test of Psycholinguistic Abilities (19) were useful in this area. Visual closure, or the tendency a youngster might show to close or shut out visual stimuli was assessed both informally and formally. Frequently, it was this problem which related to the youngster's "inability" to lipread.

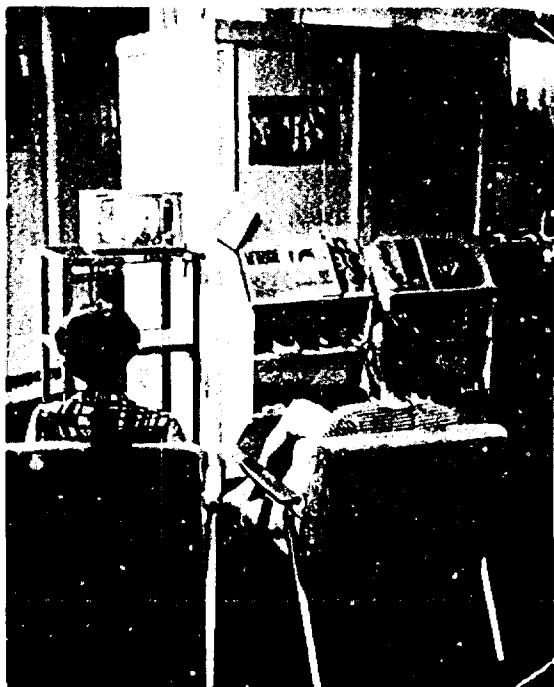
Figure-ground perception was measured by non-standardized tasks which were developed in the unit. Frostig (9, 10) perceptual materials were also used to investigate this ability as well as prepared filmstrips. A child's visual deficits were interpreted to the teacher concerned, through suggestions which could be used in the classroom. As many sources as possible were utilized to obtain these recommendations.

A further investigation centered on the assessment of a child's tactual discrimination ability. This mainly involved identification and matching of objects. Care was taken to ensure that the objects were familiar to the youngster. Throughout the evaluation the child's discrimination abilities, his orientation in space and depth perception were observed.

Audiological assessment was accomplished through informal auditory tests, play audiometry, and formal pure tone and speech audiometric techniques. Test equipment included a clinical audiometer (Belton, Model 15c), a portable audiometer (Maico Model 2B) and a speech audiometer (Grason Stadler, Model 162). All formal tests were conducted in a sound-controlled audiology suite (Industrial Acoustic Corp., Model 1401).



Testing a child's hearing



Parents observe
televised evaluation



Audiology Suite

Auditory assessment of children up to three years of age was usually accomplished through informal audiometric techniques. Informal tests are defined by Barr (3) as "those test of auditory acuity designed to give a general perception of whether or not hearing impairment is present, without regular threshold determinations being undertaken and without a more differentiated diagnosis being established." Rattles of different pitches, bells, clackers, unvoiced consonants, and simple sentences were used during our initial assessment of audition. A variety of recorded sounds was also present via amplifying equipment.

Formal measures of a child's hearing sensitivity were tried as early as two years of age. Formal tests of auditory capacity enlist the child's cooperation and usually require a direct response to stimuli. Play audiometric techniques were used as soon as the child could learn to associate an auditory stimulus with a given play activity. Success in obtaining pure tone measurements depended upon intelligence, social maturity, ability to cooperate and the selected audiometric technique. Both air and bone conduction tests were administered.

Caution was exercised in the interpretation of pure tone audiograms obtained on children under five years of age. Although pure tone audiograms were considered useful as a differential diagnostic tool, responses were further validated by the case history information and by the behavioral symptomology (23).

To further assess the status of the child's auditory mechanism, his ability to understand speech was evaluated. Speech awareness thresholds (referred to by some authors as speech detection thresholds) were obtained using play audiometric techniques. Measurement of the speech reception threshold was necessarily limited to those children who had some understanding of speech. Use of standardized spondee

lists was frequently impossible because of insufficient vocabulary. An estimate of speech reception thresholds was obtained for many children using a selection of toys and pictures of common objects.

A picture identification test was used if the child possessed the necessary maturity and vocabulary. The most frequent test utilized for this purpose was Siegenthaler and Haspiel's Threshold by Identification of Picture Test (TIP) (29). Although it was sometimes modified because of unfamiliar vocabulary, results were frequently judged to be more reliable than the child's pure-tone thresholds.

Speech discrimination, the ability to differentiate among the vowel and consonantal elements of speech, was assessed by using pictures selected from a number of speech discrimination tests, the Siegenthaler and Haspiel's Discrimination by Identification of Pictures (DIP) (30), the Haskin's Phonetically Balanced Kindergarten Word List, (14) and the Northwestern University Auditory Test No. 6 (32).

Hearing aid performance was assessed using the child's own hearing aid. Frequently, additional hearing aids were tried which were selected from the clinic stock. New hearing aids were selected and recommended in those cases indicated. Applications were submitted to the appropriate agency. Hearing aid performance was re-checked approximately one month following procurement of the aid.

Results of audiological evaluation were integrated with information from the case history and observations of behavior to formulate a description of auditory sensitivity and potential functioning.

On occasion, attempts were made to assess a youngster's auditory memory utilizing the digit symbol sub-test of the Wechsler Intelligence Scale for Children (34) or other similar items. Such assessment was

affected concomitantly by two factors -- by the youngster's degree of hearing loss and by his ability to use his residual hearing. An overall evaluation of this means of assessment suggests that this is not an appropriate tool. The validity of the results was impaired by a youngster's poor use of his residual hearing. Therefore, if he were able to discriminate the various stimuli, it was felt to be more closely related to lipreading ability (short term visual memory) than to auditory memory. The children seen rarely had sufficient ability to perform this memory task using audition alone. However, several children were able to learn auditory sequences during teaching sessions, using gross sounds, words, and short sentences.

The levels of communicative and academic functioning displayed by the youngsters referred for evaluation was viewed in a variety of ways. All areas related to one another, but for purposes of report writing, these abilities can be described in the following way. Firstly, a voice examination and a peripheral-oral exam might be given. Following this, speech and language development could be assessed, in terms of inner, receptive, and expressive abilities as illustrated by the child's ability to gesture, speak, lipread, read and write. Lastly, formal achievement tests could be administered in the areas of reading and arithmetic.

The order of presentation was not necessarily that listed above, and evaluation was never completed in one session. Information on the areas of the child's functioning was gained throughout the entire evaluation.

A peripheral-oral examination was given to children with known neurological involvement, and for those whose evaluation pointed to its

necessity. At this time, the speech musculature was investigated.

Frequently, with the very young deaf child, the main means of assessing inner language and non-verbal communication is through observation of the youngster in play situation as he uses (or does not use) facial expressions and body language. Observations of the child in such a setting discloses much diagnostic information particularly with reference to vocalizations, response to sounds, use of vision, social behavior, and manipulation of toys and objects.

Receptive language was viewed as that means of communication which the child gave evidence of understanding. His comprehension and reception of material presented through lipreading, print and the combined use of lipreading and audition were evaluated. Through each of these communicative means, his ability to understand sounds, words, phrases and sentences was explored. With reference to lipreading, his ability to imitate, comprehend and associate was evaluated. His understanding of the printed word was assessed. A variety of informal and formal material was used for this purpose.

The evaluation of expressive speech and language varied depending on the child's age. At a very young age, the presence of vocalization, echolalic behavior and jargon or unintelligible speech was noted. As children became older, the evaluation of expressive abilities became more complex. For each child, regardless of his age, speech production was evaluated in depth. Observation was made of the utilization of sounds, words and phrases. The degree of appropriateness of his choice was noted, and an assessment of intelligibility of speech was carried out. Omissions, distortions, substitutions and their consistency were noted. The list of words developed at Northwestern University for purposes of

studying lipreading were found to be useful for this assessment.

In association with specific speech production, language usage was also evaluated. When possible, age equivalents or grade equivalents were obtained. Spontaneous oral language, obtained by having a youngster tell a story about a picture or present a biography of himself was analyzed as to its content, structure, and the ideas expressed. The clinical teacher took advantage of every opportunity to take note of any spontaneous expression by a child. Recommendations could then be made in terms of the specific concepts in which a child needed instruction. The development of language and the order in which it might occur naturally as presented through the Fitzgerald Key (8) was useful for this purpose.

While oral language was evaluated, samples of written expressive language were also obtained. The discrepancies between oral and written language were sometimes indicative of learning problems. If this was suggested on the basis of the main evaluation, further evaluation was carried to attempt to pinpoint the area of difficulty.

In conjunction with written language, spelling skills were evaluated for each youngster. It was found frequently that spelling errors were due to lack of instruction or confusion between speech sounds and phonetic reading symbols which were presented in the classroom. When a discrepancy existed, an attempt was made to find out the cause. Often, the area of the deficit was related to a memory and/or revisualization problem.

Grade equivalents for reading and arithmetic abilities were obtained whenever possible. The results of these formal tests were also used for purposes of recommendations to teachers for her understanding of a

youngster's language difficulties. Throughout the evaluation, the degree of abstraction which could be achieved by the child and his ability to integrate information using all sensory pathways was observed. Discrepancies between one area of the evaluation and another were noted and intra-test differences were interpreted.

Assessment of the affective level of each child was held important in the overall evaluation. This measurement of affective ability was informal and employed no standard instrument.

Attempts were made to structure natural situations for the child which would allow him to display the quantity and quality of social skills he possessed. Effort was expended to observe the child and how he acted and reacted in several diads, e.g., parent-child, adult-child, child-child. The degree to which the child could extend himself in these various situations was noted. Answers were sought to the questions, "How well does he participate in a group activity; how well does he play by himself; what is his frustration tolerance level; how well does he handle failure as well as success; how introverted or extroverted is he; does he relate better to adults than to peers or vice-versa; with whom does he identify if at all; how anxious is he; is he hobbled by fears and doubts or is he apathetic; etc." Answers to these queries came from observations of the child by all members of the evaluation team who had interacted with him. The staffing sessions allowed for collection of this information so that an adequate description of the affective quality of the child could be ascertained and its implications for academic placement noted.

In addition to observation of the child, a careful scrutiny was given to the observed parents' behavior patterns as well as the implications drawn from the case history of each child. Discernment of

rejection or guilt on the part of either parent was considered important in evaluation of the child's behavior. Any suspicion of cultural, social, or personal deprivation was explored for its reality and apparent impact. Records of frequent hospitalizations, of frequent relocations, of mental stress on the part of the parents, of divorces, deaths, or illnesses in the family were considered in relationship to the staff's observation and evaluation of the child's behavior.

Overall, a concerned attempt was made to evaluate the child's non-academic behavior and its influence on the final recommendations for the child. The etiology for any deviant behavior patterns or affective levels was sought. When possible, recommendations were made to alter those circumstances which were negatively affecting the functioning of the child. In other cases, therapeutic measures were suggested to counteract those circumstances which could not be changed. An honest attempt was made to evaluate the whole child and thus make academic recommendations which were more realistic and which held more probability of success for the concerned child.

The evaluation of a child included constant utilization of information obtained from medical and educational records and parent interviews. A complete and comprehensive case history was developed from records obtained from all previous medical and educational settings in which the child had been. The project nurse interviewed the parent concerning medical history and medical problems. She also arranged for follow-up medical tests when these seemed indicated during the evaluation. The coordinator of clinical services interviewed the parents concerning previous education (if it had occurred) and concerning communicative and psycho-social development and functioning in the family environment.

Problems identified were usually discussed further by the psychologist and the parent. Considerable emphasis was placed on parent-child and family relationship during the evaluation.

Tabulations of data on the children evaluated may be found in Appendix C.

There has been no one characteristic, other than the presence of an auditory disorder, that would describe the general population of children evaluated at the HMEC during the past three years. No one child can be called the typical evaluation child. Most of the children evaluated could not be classified "normal deaf children" the "normal deaf child" does not cause problems in classrooms and is placed easily by other agencies or by his parents. Multiply-handicapped hearing impaired children who are experiencing difficulties in existing educational settings or who are not enrolled in any school were the ones referred to the unit. On many occasions the hearing impairment was not the primary problem but secondary to other disabilities such as retardation, emotional disturbance, cerebral dysfunction, and perceptual learning disorders. It was found in many cases that the hearing loss was diagnosed and the child was placed in an educational setting for the deaf with little concern for his complex problems. Less fortunate children had not been educationally placed. They had been rejected by schools for the deaf after screening admissions tests. Their multiply-handicapping problems precluded education in existing facilities; Massachusetts has minimal provisions for multiply-handicapped deaf children. Some such children were attending inappropriate educational settings. It was not uncommon to find a deaf retarded child in public school special classes for normally hearing children, or in institutions

for the retarded, with no provision made for the hearing impairment in educational programs or procedures. Emotionally disturbed children who were deaf could not be educated under provisions of legislation for the emotionally disturbed because of the combined hearing deficit. Children with perceptual or learning disorders could not be placed in the "aphasic" classes of the Boston School for the Deaf because of a two year waiting list. Placement for many children had to be found out of state.

The first year of the project's operation was devoted to pre-school children seeking enrollment in schools for the deaf. Thirty one children were seen in all, ranging from the ages of 2-5 years to 6-11 years. All children were placed in school. Of these children, 19 were known to be products of rubella during pregnancy and showed the various range of characteristics frequently used to describe rubella children (33) (smallness of size; hyperactivity typical of brain injury, visual and/or hearing loss, and congenital heart problems). Only four had a mild hearing loss. The rest had moderate to profound hearing losses. Evidence of emotional disturbance was noted in half the children at the time of evaluation. Behavior appeared to improve after entrance to school. An evening parent education program was designed to help the parents deal with some of the child's problems at home. Psychological tests indicated a range from sub-normal to bright but few seemed to be functioning at their full potential. About half the children could use and understand gestural communication but few could lipread or use verbal communication in any manner.

Information on these pre-school children reveals a late age of acquisition of a hearing aid. Further analysis of their medical records



EVALUATION
NURSERY

showed that the children received hearing aids soon after initial contacts with hospital audiology clinics. A delay was apparent in the pediatrician's or family physicians referral to a hospital audiology clinic, despite the large number of "high risk" infants and parents' expressed concerns about the infant's lack of response to sound or voice.

The second and third years of the unit's functioning were open to referrals of all ages from any agency, school, or parent. Factors associated with the hearing impairment were rubella, congenital and familial deafness, meningitis, encephalitis, pre-maturity, birth injury, RH incompatibility, hydrocephaly, and losses of unknown etiology. Health problems were further complicated by heart murmurs, hyper-activity, thrombocytopenia, asthma, allergies, diabetes, blindness, recurrent otitis media and cystic fibrosis.

Audiologically, the children evaluated had nearly all been fitted with their own hearing aids by hospital audiology clinics. During evaluation, approximately 25% of the children were found to have inappropriate or inadequate amplification and a few had never worn hearing aids. Appropriate recommendations were made for financial assistance. It was noted that a large number of children referred for educational evaluation and/or placement had no ability to identify amplified speech elements or words using audition only. These children were also identified as those having a profound hearing sensitivity loss. Children with hearing losses of moderately severe to severe degree were generally able to differentiate among several selected words, color names, family names and a few familiar words.

Considerably more than half the children had multiple disability

in addition to their hearing loss and only a few of the children could be said to be performing to their potential. The two major additional areas of disability were found to be diffuse brain injury and emotionality. Numerous children were functionally retarded for reasons of emotional and/or cultural deprivation, and educational retardation. A small percentage of the children had a triple handicap or worse. An area of weakness in evaluating the children who showed emotional disturbance was finding a psychiatrist willing to deal with hearing impaired youngsters and who was willing to make a definite diagnosis for educational placement.

Common academic problems for deaf youngsters seem to lie in the areas of underdeveloped visual perception. Psycholinguistic functioning was poor. Mathematics and reading levels approximated the 2.8 grade level at best. Some of the children with poor oral-aural communicative abilities responded to trial presentations of material through a combined oral-manual approach and were referred to educational settings (out of state) which uses a combined approach.

From the parent interviews, no consistent trend was found in the family history or environmental background. All socio-economic levels were represented. The presence of a handicapped child in the family, however, did frequently bring about an environmental change in the family unit. Some families moved to a new location or type of living area for the convenience of education or for the safety of the child. Sometimes, parental discord arose from the inability of parents to cope with a hearing impaired child. In some cases, a child had been placed in a foster home by welfare agencies.

Deficiencies in ego development were found in many of the children.

Parent interviews often revealed evidence of early rejection of the hearing impaired child, or of pressure for the child to compete as a hearing child. Some tendency of parents to overprotect and infantilize their deaf child was also found.

Feelings of hostility toward agencies and schools were sometimes revealed, which affect parent-child relationships and implementation of recommendations. Counseling was therefore provided by an evaluation team member, or a parent would be referred to a counseling agency to help families resolve some of these deep-seated feelings.

On the whole, interviews related to speech and language development revealed parents to be poor informants concerning developmental landmarks in communicative functioning. Therefore, observations of parents and child in the lounge-play area, sometimes by a closed circuit television, provided more meaningful information about a parent and child's method of communication.

Parental understanding of deafness and attitudes about hearing aids were also discussed. It was found the parents recognized a child's hearing difficulty, but could not find a pediatrician willing to give them a definite diagnosis or refer them to an Ear, Nose and Throat or Audiology Clinic. A delay of 18-24 months was found to exist for many children between the parents' first report of suspicion of hearing loss and referral for audiological examination. Many of the pediatricians were aware the mothers had had German measles in early pregnancy but did not follow up with hearing tests.

Parents' perception of the child's educational problems were also investigated. Considerable time was spent explaining state laws pertaining to education of the deaf and in helping the parents understand

the recommendations of the evaluation unit staff and the implications for their child's education.

Comprehensive educational evaluation of the children referred revealed a group of children with complex problems in cognitive, communicative, and affective functioning. Each child was different in the combination of behaviors exhibited. The results of the evaluations point to the need for highly flexible educational and guidance programs for the children and their parents. New and different programs are required to meet the needs presented by the children and their families.

References for the Evaluation Process

1. Adler, E.P. (Ed.) "Deafness," Journal of Rehabilitation of the Deaf, Monograph #1, March, 1969.
2. Association for Children with Learning Disabilities. Selected Papers on Learning Disabilities, Third Annual Conference Tulsa, Oklahoma, March, 1966.
3. Barrm, B., Pure Tone Audiometry with Pre-School Children. Acta Otolaryngologica, Supplementum, 121, 1-84, 1955.
4. Bender, L., A Visual Motor Gestalt Test and Its Clinical Use, American Orthopsychiatric Association, New York, 1938.
5. Chess, S. and Thomas, A., (Eds.) Annual Progress in Child Psychiatry and Child Development, Brenner-Mazel Publishers, New York, 1968.
6. Chess, S. and Thomas, A., (Eds.) Annual Progress in Child Psychiatry and Child Development, Brenner-Mazel Publishers, New York, 1969.
7. Davis, H. and Silverman, S.R., Hearing and Deafness, Holt, Rinehart and Winston, New York, 1965.
8. Fitzgerald, E., Straight Language for the Deaf: A System for Instruction, The Steck Company, Austin, Texas, 1949.
9. Frestig, M. and Horne, D., The Frestig Program for the Development of Visual Perception. Follet Educational Corporation, Chicago, 1964.
10. Frestig, M., Developmental Test of Visual Perception, Consulting Psychologists Press, Palo Alto, Calif., 1966.
11. Furth, H.G., Thinking Without Language, The Free Press, New York, 1966.
12. Goodenough, F.L., Measurement of Intelligence by Drawings, Harcourt, Brace and World, New York, 1926.
13. Haussermann, E., Developmental Potential of Pre-School Children, Grune & Stratton, Inc., New York, 1958.
14. Haskins, H.L., Haskins' Kindergarten PB Word Lists, Unpublished M.A. Thesis, Northampton University, Evanston, Illinois.
15. Hellmuth, J., (Ed.) Learning Disorders, Vol. I, Special Child Publications, Seattle, Washington, 1965.

16. Helyred, R., The Koppitz-Bender Gestalt Test for Young Children, Grune & Stratton, Inc., New York, 1964.
17. Johnson, D. and Myklebust, H., Learning Disabilities, Grune & Stratton, Inc., 1968.
18. Karnes, M.B., "Helping Young Children Develop Language Skills," A Book of Activities.
19. Kirk, S.A., McCarthy, J.J. and Kirk, W.D., Illinois Test of Psycholinguistic Abilities, Revised Edition, University of Illinois, Urbana-Champaign, 1968.
20. Koppitz, E.M., The Bender-Gestalt Test for Young Children, Grune & Stratton, Inc., New York, 1964.
21. Lawrence, C.A., and Vescevi, G., Deaf Adults in New England, Final Report of Project #RD 1576-S. United States Department of Health, Education and Welfare, Washington, D.C., December, 1967.
22. Levine, E.S., The Psychology of Deafness, Colombia University Press, New York, 1967.
23. Myklebust, H.R., Auditory Disorders in Children, Grune & Stratton, Inc., New York, 1965.
24. Myklebust, H.R., Development and Disorders of Written Language, Vol. II, Grune & Stratton, Inc., New York, 196 .
25. Myklebust, H.R., (Ed.), Progress in Learning Disabilities, Vol I, Grune & Stratton, Inc., New York, 1968.
26. Pascal, O.R. and Suttell, B.J., The Bender Gestalt Test, Grune & Stratton, Inc., New York, 1951.
27. Rapaport, D., Gill, M. and Schafer, R., Diagnostic Psychological Testing, International University Press, New York, 1968.
28. Rapaport, S.R., Childhood Aphasia and Brain Damage, Vol. II, Differential Diagnosis, The Pathway School, Livingston Publishing Co., Penn., 1965.
29. Siegenthaler, B.H. and Haspiel, G.S., Discrimination by Identification of Pictures (DIP) Test, Pennsylvania State University Press, University Park, Penn., 1967.
30. Siegenthaler, B.H. and Haspiel, G.S., Threshold by Identification of Pictures (TIP) Test, Pennsylvania State University Press, University Park, Penn., 1967.
31. Tarnapol, L., "Testing the Educationally Handicapped Child," Academic Therapy Quarterly, III, Winter, 1967-68.

32. Tillman, T.W. and Carhart, R., An Expanded Test for Speech Discrimination Utilizing CNC Monosyllabic Words, Northwestern University Auditory Test No. 6, Report No. SAM-TR-66-55, Brooks Air Force Base, Texas, June, 1966.
33. Vernon, McCay, "Characteristics Associated with Post-Rubella Deaf Children: Psychological, Educational and Physical," Volta Review, 69.3, 1967.
34. Wechsler, D., Wechsler Intelligence Scale for Children, The Psychological Corporation, New York, 1949.
35. Zigmond, N. and Cicci, R., Auditory Learning, Dimensions Publishing Company, San Rafael, California, 1968.

IV. PROGRAMS AND PROBLEMS OF IMPLEMENTATION

As a result of the educational evaluation of children and the educational problems revealed a number of new programs were inaugurated, which were later incorporated by the Horace Mann School for the Deaf. Problems were encountered in implementing many of the recommendations. Some of the problems will be rectified by the re-organized staff of the Evaluation Unit as it is continued under local funding and state reimbursement. The programs, problems and plans for the future are discussed in this chapter.

A. Parent Education Program

An evening parent education program for fathers and mothers of nursery age children was inaugurated in January, 1968. Many of the parents continued attending after their children were enrolled in a regular nursery class of the Horace Mann School for the Deaf. The nursery teachers had concurrently organized a program for mothers one afternoon a month. The success of the evening meetings and the similarity of problems raised by parents in both groups resulted in a decision to combine the programs in evening sessions for both parents.

Fifty percent of the parents of the children enrolled in the evaluation and school nursery programs attended twice-monthly sessions. All project staff members, the nursery teachers and the assistant principal of the Horace Mann School participated in the meetings. The meetings were informal and centered on discussion of problems brought out by the parents. Several talks were given by staff members relating to problems raised at previous meetings. Problem areas of concern to

parents were eating, toilet training, discipline, sibling relationships and communication with their deaf children.

A guide to summer activities for deaf children was prepared by the nursery teachers of the school and the Evaluation Unit staff and distributed to all parents at the last meeting in the spring. The meetings appeared to be highly successful for those parents who attended.

In the summer of 1968, the nursery teacher who has also served as a clinical teacher of the evaluation nursery, was sent to the John Tracey Clinic for training in the education of parents of young deaf children. In September, 1968, she became the first full-time parent educator on the staff of the Horace Mann School for the Deaf under local funding. During the past two years she has conducted day-time group meetings for fathers and mothers in a conference lounge at Boston University. She will continue to function as parent-teacher coordinator and will expand the parent education and guidance program until all parents of Horace Mann School children have been included in meetings and conferences.

B. Class for Hard-of-Hearing Children

The Evaluation Unit of the Horace Mann School evaluated 31 pre-school children in 1967-68. Included in that number were six hard-of-hearing children who had sufficient residual hearing which, with a personal hearing aid, would allow a normal pattern of language development through concentrated language stimulation. Two more children of the above description were discovered in the fall of 1968.

These eight children in the process of developing oral communication could not be considered as candidates for the Horace Mann School along with non-verbal peers, where language teaching, while natural in

concept, is planned for the severely to profoundly deaf child. On the other hand, there were no hard-of-hearing classes established at the pre-school level and regular nurseries or kindergartens for normally-hearing children would prove too great a challenge to the hard-of-hearing pre-schoolers,

A nursery classroom in the Horace Mann School for the Deaf was designated for these eight hard-of-hearing children for morning sessions. A regular teacher of normal early education was hired by the Boston Public Schools along with a trained teacher of the deaf. The teacher of normal children conducted the nursery activities and the teacher of the deaf tutored the children individually every day. An intensive parent program was established in conjunction with the nursery program. The Assistant Principal of the Horace Mann School and the Evaluation Unit staff were advisors to the program. The Unit also provided audio-logical assessment, hearing aid evaluation, curriculum planning and a special academic tutoring program for five of the best students. Periodic conferences were held to determine the progress of each child in readiness for a regular kindergarten.

The responsibility for the education of these hard-of-hearing children was assumed by the Horace Mann School for the Deaf, with follow-up evaluation and consultation available from the Evaluation Unit (Title III Project). At the end of the 1968-69 school year, the school administrators arranged for the enrollment of the children in a kindergarten class of normally hearing children at the Peter Fanusell School as a group on Tuesdays and Thursday mornings for special instruction by a teacher of the deaf. Regular parent conferences were conducted by the school's parent education coordinator. During the spring of 1970,

it became evident that the children should have intensive instruction from a trained teacher of the deaf during their year in first grade. The school administrators attempted to locate a classroom in a school for the normally-hearing for education under a teacher of the deaf, with maximal opportunity for interaction with their normally hearing peers. No classroom space could be found in a Boston elementary school, so the class will reluctantly be conducted at the Horace Mann School with the expectation that the children will be integrated into regular elementary school classrooms within a year.

C. Class for Deaf-Retarded Children

Within the past few years, educators have become aware of the presence of a relatively large population of children with more than one handicap. Of these multiply handicapped children, the deaf mentally retarded constitute the largest single group.

Awareness of this population of deaf-retarded children occurred rapidly within the Horace Mann Evaluation Unit. What became more painfully apparent was the absence or inadequacy of any educational setting appropriate for this type of child. The prevailing situation created an unresolvable dilemma for the parent. The academically oriented programs sponsored by schools for the deaf are totally unsuitable for these children because of their retardation. On the other hand, special education programs for the mentally deficient make no provision for accommodation of these children's lack of speech and hearing. Thus, only two courses of action were available and both were extremely unacceptable. One course is to place the child in a school for the deaf wherein he will experience extreme frustration and defeat and will make little or no progress. The alternative is



Group Teaching



Group Activity

to keep the child home where he is spared the humiliation of exposing his mental inadequacy, but where no facilities or programs are available to foster whatever degree of development he is capable of attaining.

Traditionally, these children have been considered as retarded deaf children. It was suggested that these children be considered as retarded first and thereby apt candidates for exposure to the methods and curriculum advanced by educators of the mentally retarded, with modification because of the hearing loss.

The decision was made to set up an experimental class to investigate the efficacy of this approach. A qualified teacher of the mentally retarded was hired and a class of four children established. The class was to operate within the confines of the Horace Mann School for the Deaf in order to allow the teacher to take advantage of the special facilities and equipment available plus utilization of the staff and facilities of the Evaluation Unit. It was decided that the teacher need have no previous experience or special training in teaching the deaf. The rationale for this qualification was a pragmatic one; teachers trained and experienced to handle both handicaps are very rare. Also, in terms of hierarchy, the obstacle of retardation took ascendancy. The children in the class would be drawn from the alternate situations mentioned above; some would be taken from classes they were attending but in which they were not participating; others would be drawn from homes, having no previous school experience. This was felt to be representative of what would occur in the community should classes of this type be established within public school programs. A pilot class of four children was conducted in the Evaluation Unit from January 27 to

June 6, 1969.

1) The Educational Program:

The educational program was developed by the clinical teacher of the mentally retarded in consultation with other members of the Evaluation Unit staff. Basic to all aspects of the program were the following principles:

Communication: Any method of communication was accepted from the children and used by the teacher. Although spoken language was emphasized and vocalizations encouraged, the teacher and the children communicated by gestures, pantomime and demonstration as well; no attempt was made to teach through finger spelling or formal sign language.

Success: The program was designed to have each child succeed as often as possible. This was accomplished by providing each child with activities in which he or she could succeed. Creative dramatics were used as well as physical activities and games.

Development of Self-Concept: Through providing each child with opportunities for success, it was felt that a more wholesome self-concept would develop.

Individualization at Child's Level: The functioning level of each child was continually considered and re-assessed. The level varied from pre-school to the primary level. Teaching was individualized to the child's level. Group teaching was also used, but within the group the individual levels were utilized.

Purposeful Seatwork: Seat work was purposeful and used to reinforce, clarify, review material taught, and develop independent thinking.

Active Learning Through the Use of Materials: Teaching was done primarily through the medium of exercises with things rather than through

the medium of words. This was considered absolutely necessary by the nature of the dual handicap. In each activity the child was able to manipulate materials and thus became actively involved in the learning situation.

Science and Social Studies. The program initially used science units, involving a discovery and demonstration approach. For example, in a unit on seeds, the children were encouraged to examine various seeds, plant them and watch the rate of growth and the effects of water and light. The discovery approach has much value for the deaf-mentally retarded child, since verbal explanations are often not understood, but materials and effects can be controlled so that the child can actually see differences, causes and effects. Other high interest units were electricity and magnets. Social studies units utilized activities and materials on the home, community helpers, food, etc., in order to prepare the children for living in society.

Arithmetic. Readiness in this area began with the recognition of the quantity and symbols to ten. Three dimensional objects which could be moved from one place to another as they were counted were used. Number lines and charts relating the number to a quantity were placed in the classroom to provide a constant reference for the children. Seatwork papers initially consisted of drawing the quantity which related to the number symbol and the reverse of writing the number which related to the quantity. Each number was viewed alone, in sequence, and in relation to its neighboring numbers. Since "How many," is an important verbal concept for deaf children, those particular words were used in understanding quantity. Rote counting ability was drilled on for all children regardless of speech ability.

Once a child understood the concept of a number as representing a quantity, grouping was used under the framework of total quantity to introduce the child to number combinations in preparation for the computation of numbers through addition and subtraction. Grouping was taught through three-dimensional objects and pictures. When a child understood the grouping problems, addition and subtraction were begun. The grouping principle was continued by naming and drawing the quantity representing each number and then completing the process of adding or subtracting.

The concepts of time and money were also introduced. Time was shown through the use of the clock and the calendar. Initially the time children arrived, went to recess, and went to lunch were pointed out. Each child made his own calendar every month and would daily write in the day of the week. The changing from one day to another was correlated with the weather from day to day. Money was taught through the manipulation of real coins: At first, five pennies and their relation to one nickel, then the different combinations of coins above five cents.

Language Development. The natural language approach was used throughout. With this method, recognition of print was stressed more than speech and lipreading abilities. Verbal responses ranged from single words to simple sentences. Although repetition of written stimuli was frequent, accent on learning was primarily based on the children's manipulation of the instructional material. It was hypothesized that through this means the children understood the concepts although their abilities to describe the learning experiences were limited.

Language exercises were planned to develop the children's ability to express themselves and to check comprehension of material in words.

This was done mainly through the naming of objects, matching the picture to the appropriate word, or through creative dramatics.

Readiness Skills-Perceptual Training. The work in this area had as its goal the quick and accurate recognition of similarities and differences in symbols, objects, and words. Worksheets presented pictures which differed in size, shape, directional orientation, outline, or detail. The visual discrimination tasks increased in difficulty.

Visual memory was also an important aspect of perceptual training for it is necessary to the development of a sight vocabulary. To develop visual memory, the game "What's Missing?" was played. A number of objects was placed in front of the children; the children looked at the objects and then closed their eyes, while one object was removed. When they opened their eyes, they must tell what is missing. The game was also used for memory of numbers.

Reading. The experience chart method was used to introduce reading and to build on previously acquired reading skills. The rationale for this approach was that vocabulary and subject matter could be controlled. The difficulties of using this method with deaf children is obvious. The approach was used in conjunction with object naming, in which objects were named which could be used in the experience chart. The charts consisted of stories about the children; what they did, what they wore to school, what they saw, etc. Each sentence began with a child's name, assuming that the child knew his name, and that this would evoke interest in the following words.

The experience chart method was carried into the science units. Thus the charts were used to list and describe. In producing the charts, responses from the children were not only encouraged but demanded. For these responses, speech was expected from those with the ability, but for

others gestures were accepted. Each chart was reviewed until the material became outdated. The charts served a purpose as long as they held the children's interest.

Non-Academic Activities. Physical education, arts and crafts, cooking and other kitchen skills were taught by the specialists in these areas who were on the Horace Mann School staff. The period after lunch was allocated for these activities because of the convenience, since the teacher of the retarded was only available mornings for the academic program. It is suggested that in the future these activities be dispersed throughout the day.

2) Continuation of the Class by the Horace Mann School for the Deaf:

As a result of the success of the pilot class under the auspices of the Title III Project, the principal of the Horace Mann School arranged for the continuation of the class within the Horace Mann School program. The teacher of the pilot class was employed by the City of Boston to conduct the class. In the fall, a teacher of the deaf was assigned to the class to complement the teacher of the retarded in order to provide individual tutoring, especially in language development, language comprehension, and speech. During the year, emotional problems and learning disabilities became evident in the children, but supplemental services for these problems were not available from the Evaluation Unit. The teachers of the class stated that the responsibility for the class should have remained with the Evaluation Unit. The Unit will assume responsibility for supervision, consultation and supplemental services during 1970-71.

D. Audiological Services for the Horace Mann School for the Deaf.

Prior to the initiation of the Title III Project, limited audiological services in the Horace Mann School for the Deaf were provided by the school

nurse. During the first year of the Title III Project, the project audiologist gradually assumed responsibility for audiological services for the children enrolled in the Herace Mann School for the Deaf. When the renovated facilities were completed for the beginning of the second year of the Project, the new audiology suite and audiological equipment permitted the audiologist to provide comprehensive audiology services for all the children in the school. Services included yearly assessment of each child's hearing sensitivity and speech discrimination, and re-evaluation of the effectiveness of the child's own hearing aid in providing amplification.

As a result of these re-evaluations, during 1968-69, twenty children received new hearing aids in accordance with the staff audiologist's recommendations. The majority of these children had been wearing the same hearing aid for eight to ten years.

The hearing aid performance of approximately 25 other children was marginal. It was recommended that these pupils be re-examined to determine if more satisfactory amplification could be selected for them.

In general, the test results of speech discrimination ability were the most alarming. It was disturbing to note that 69 children (approximately 50% of the school population) have absolutely no ability to understand speech. It is difficult to understand how so many children could have failed to learn some discrimination skills if they have received the proper auditory training.

During the 1968-69 year, two "in-service" meetings were held for the teachers. The audiologist made the following points:

- 1) Each child in the school can benefit from the use of amplification.

- 2) Hearing aids and auditory units should be kept in proper working condition and should be used constantly in the classrooms.
- 3) Nearly every child in the school can learn to identify some speech elements through aided hearing alone.
- 4) Through the simultaneous use of auditory and visual cues nearly every child will understand more than if he relies on one sensory input.
- 5) In general, coercion will not be necessary to keep amplification on a child after he is taught to use his residual hearing.
- 6) Teachers were urged to report any indication of fluctuating hearing to the school nurse and audiologist.

Re-evaluations continued during the 1969-70 Project year. The audiological services will continue to be provided in the Horace Mann School for the Deaf by the Evaluation Unit audiologist in future years.

E. Problems of Implementation.

Several problems were encountered by the Title III Project staff in implementation of the recommendations resulting from the educational evaluations.

1) Unavailable or Inappropriate Educational Placements:

The children evaluated were primarily those who were experiencing difficulties in school, or for whom appropriate school placements were difficult to find. The Evaluation Unit staff attempted to assist parents and school officials in locating suitable educational placements. Because so many of the children had multiple learning, behavior, communicative, environmental and family problems, it was difficult to find appropriate educational placements. Children were usually not eligible for existing

programs. However, the Evaluation Unit was able to obtain educational placements for most of the children, but recognized that in many cases the educational placement was inappropriate but the best available. In some cases, educational placement had to be made outside the State of Massachusetts. In few cases, no placement could be found and the children are not in school.

2) Lack of Follow-up in "Outside" Schools:

Many of the referrals of children for evaluation and recommendations came from public and private schools other than the Horace Mann School for the Deaf. After evaluation, recommendations were made by written report, conferences with teachers who came to the Evaluation Unit, or in conferences for which the project staff travelled to the referring school. For the most part, the referring schools were receptive to the recommendations and suggestions made. However, staff commitments precluded any follow-up to determine the extent to which the recommendations were followed or whether they were appropriate after the referring school attempted to implement them. The project staff has no knowledge (other than through the questionnaires returned--see Chapter VII) as to the relevance of the recommendations or as to the effectiveness of the programs provided by other schools for the children evaluated.

3) Problems within the Horace Mann School:

The location of the Title II project in the Horace Mann School for the Deaf brought school and project personnel into daily contact. It might be assumed that this proximity would have permitted a more efficient contribution of the Title III Project to children and teachers of the Horace Mann School. Although new types of classes and services initiated in the Evaluation Unit were incorporated as permanent programs in the

school, the impact of the Evaluation Unit on educational practices with the existing Horace Mann classrooms was minimal, due to several factors. The delay in acquisition of facilities, equipment and some staff, especially psychologists, during the first year limited the services which could be provided. Desired services during the third year were curtailed by the cut in Title III funds.

Among the problems encountered were lack of time for teachers to become involved in the evaluation process and to participate in staffing sessions, professional disagreements of some teachers and school administrators with the recommendations made by the Evaluation Unit team, inability of the school to enable teachers to provide individual assistance recommended because they were responsible for the entire class, unavailability of school supervisory personnel to assist teachers in implementing recommendations, unavailability of Title III personnel to provide the supplementary tutoring recommended, lack of preparation or experience of Horace Mann teachers with deaf children having multiple handicaps, difficulty experienced by Horace Mann School administrators in recruiting experienced trained teachers of the deaf who could deal with the problems revealed by the educational evaluations and insufficient planning by school and project administrators in developing procedures for teacher-project staff interaction, responsibilities and authority.

The problems were probably aggravated by the fact that the presence of the Title III Project in the Horace Mann School caused more children with multiple problems to be referred to the school, and increased the pressure of the school to accept the children for whom other educational placements were not available. The enrollment of the school increased

substantially during the three years of the Title III Project. In retrospect, it appears that neither the school nor the project were sufficiently prepared to deal with the ongoing educational problems of some of the children.

F. New Programs and Procedures Needed

- 1) Development of classes for the hard-of-hearing in public school systems throughout the region. These classes should be located within schools for normally-hearing children.
- 2) Development of classes for deaf multiply-handicapped children, especially in learning disabilities, emotional disturbance and mental retardation. A state-wide approach is needed. A single school for the deaf cannot and should not provide all the programs required.
- 3) Expanded programs of parent education and counseling, especially for parents of deaf adolescents.
- 4) Provision for greater teacher involvement in evaluation of children.
- 5) Consultation and supplemental services for assisting teachers in implementing the recommendations after evaluation of children.
- 6) Expansion of evaluation services throughout the state to serve more children.
- 7) Availability of medical consultants for the evaluation process within the educational setting.
- 8) University programs to prepare teachers of deaf multiply-handicapped children.
- 9) Development of curricula for classes of multiply-handicapped deaf children.
- 10) A public relations program in the medical professions to secure earlier identification and referral of children with suspected hearing

impairments.

11) A public relations program for the purpose of identifying needed educational programs and initiating such programs throughout the state.

12) A public relations program for the Evaluation Unit to secure understanding and acceptance of recommendations for children evaluated.

G. Plans for Continuation in 1970-71

The success of the evaluation process and the children's disabilities identified in the evaluation process demonstrated the need to continue the project on a permanent basis despite the problems encountered. The Boston School Department approved the continuation of the Evaluation Unit with a budget for 1970-71, comparable to that of the second year of the Title III Project in expectation of reimbursement by the Bureau of Special Education. Boston University was asked to continue to operate the Evaluation Unit on a subcontracting basis for 1970-71, while procedures were developed by the Boston School Department for the new types of positions required by the Unit. New job descriptions were prepared and recruiting and hiring of new staff was undertaken during the late spring and early summer of 1970.

The staff for the 1970-71 school year will be:

Director: Wilbert Pronovost, Ph.D (3 days weekly)

Coordinator of Clinical Services and Audiologist: Nancy Miller, M.A. (full time)

Psychologist: Richard Thompson, Ph. D. (full time)

School Social Worker: Eleanor Clasby, M.S.W. (full time)

Clinical Teacher of the Deaf and Assistant Audiologist:

Raleigh Pinsky, M.A. (full time)

Clinical Teacher of Learning Disabilities: Joan Bates, M.Ed. (4 days weekly)

Consultant, Learning Disabilities: Eleanor Messing, M.A. (1 day weekly)

Secretary: (to be hired)

Clinical Teacher of the Deaf: (to be hired)

Consultant Pediatricians: (to be hired)

The proposal of activities of the Evaluation Unit during 1970-71 are:

1. Comprehensive educational evaluation of children with known or suspected impairment by an interprofessional team, including, as much as possible, the child's teacher.
2. Consultation, educational programming, supplemental individual services and follow-up as indicated by the evaluation and according to the availability of staff time for such services.
3. Specific services for the Horace Mann School for the Deaf
 - a. Screening evaluations of all children not previously evaluated.
 - b. Evaluation of all children applying for admission to the Horace Mann School for the Deaf, with follow-up in placement within the Horace Mann School.
 - c. Evaluation of all children expected to leave the Horace Mann School at the end of the 1970-71 school year to be completed as early as possible.
 - d. Evaluation of all children in language problems, classes, transitional classes, and class for deaf retarded.
 - e. Evaluation of specific children referred by classroom teachers or administrators.
 - f. Consultation and supervision for teachers of special problems classes--language problems classes transitional classes, class for deaf retarded.
 - g. Consultation with all teachers on implementation of results of educational evaluation.

h. Supplemental individual tutoring and/or trial educational programming within the time capabilities of the Evaluation Unit staff.

i. Assistance of appropriate staff members in parent education and counseling program of the school.

4. Services for other public and private schools. (Within the limitations of available time of the Evaluation Unit Staff, other hearing impaired children enrolled in other schools of the Commonwealth, will be scheduled for the Evaluation Unit services on a referral basis. It is anticipated that the time available for non-Horace Mann School Children will increase from the beginning to the end of the school year.)

a. Comprehensive educational evaluation and reporting of recommendations.

b. Follow-up consultation with referring school personnel.

5. Availability of the Evaluation Unit Director as a consultant to the Educational Planning Center of the Boston Public Schools in relation to the construction and program planning for the new Allston-Horace Mann Schools complex.

V. OTHER PROJECT ACTIVITIES

Although the major activity of this Title III Project was the pilot operation of the Evaluation Unit, other activities were also undertaken.

A. Continued Planning of New Facility

The Horace Mann Planning Project, in 1966-67, developed the educational specifications for a new center for communicative disorders. During the 1967-68 year, activities were related to legislative action; the following bill was passed in July, 1968:

Section 28B of General Laws:

Any city, town or regional school district in which an application for a grant for construction of a school for the deaf... is approved by the Board of Education shall receive a construction grant equal to 65% of the approved cost of construction.

The Horace Mann Planning Project recommended that the new Horace Mann Center be constructed in the western section of Boston in conjunction with the construction of a new elementary school in order to provide for interaction of deaf and hearing children and maximize the school facilities as a community school. The Boston School Department, with approval of the State Department of Education, authorized its Educational Planning Center and the new Washington Allston Elementary School.

The Educational Planning Center assisted the Allston community in the organization of four community action committees to become involved in the planning activities and decisions relating to the two schools. The Horace Mann Project Director became a member of the Committee on Special Education which was chaired by Mr. and Mrs. Daniel Oendron. The committee included parents, interested members of the community and teachers

of the present Washington Allston School. Also included on the Committee on Special Education were Robert Danahy, President of the Massachusetts Parents Association for the Deaf and Hard of Hearing, and Alice Gold, Advisor to the Boston Deaf Club.

The recommendations of the Committee on Special Education resulted in a draft proposal which was accepted by the Boston School Department and by members of the Allston community. A most significant aspect of the recommendations was the one that the proposed Evaluation Unit of the Horace Mann Center be expanded to include all types of exceptional children and placed in the central facilities unit of the new complex.

Following acceptance of the proposal for joint construction of the two schools on the same site, the Committee on Special Education devoted itself to further planning of special education services for the new complex. Resource persons were invited to committee meetings to discuss philosophies and approaches. Representatives of the State Department of Mental Health, the Boston School Department of Special Classes, and of the Boston College and Boston University Departments of Special Education attended these meetings at different times. One result of the continued planning was the development of revised educational specifications for the Evaluation Unit of the new complex.

In the 1966-67 report of the Horace Mann Planning Project, a secondary education unit was recommended. In order to provide more specific guidelines for the development of a secondary education program for the deaf, an Advisory Committee on Secondary Education was invited to meet. Attending this meeting were:

Marianne McKeen, Supervisor, Programs for the Deaf
Massachusetts Bureau of Special Education

Eileen Connolly, Principal, Horace Mann School for the Deaf
Charles Healey, Guidance Counselor, Horace Mann School for the Deaf
Stanford Elish, Guidance Counselor, Clarke School for the Deaf
Sr. Mary Kieran, Principal, Boston School for the Deaf
William Flanagan, Massachusetts Parents Association for the Deaf and Hard of Hearing
Alice Gold, Hearing Adviser, Boston Deaf Club
Wilbert Prenevest, Horace Mann Planning Project

Prior to the meeting there had been contacts with Patricia Quinn, Principal, Beverly School for the Deaf, and Robert Murray, Associate Director of the Educational Planning Center who has been involved with planning of the Madison Park Comprehensive High School for the City of Boston.

According to data provided by Miss McKen, 48 students were enrolled in high school programs for the deaf outside of Massachusetts.

American School for the Deaf (Conn.) - - 28
Austine School (Vermont) - - 13
St. Mary's School for the Deaf (N.Y.) - - 6
Lexington School for the Deaf (N.Y.) - - 1

Many of these students could be educated in Massachusetts if appropriate programs were available.

On the basis of opinions and information currently available, it is apparent that a variety of flexible programs and facilities are required. The recommendations for the various programs are summarized below:

- 1) Services for deaf students in regular high schools:
 - a) Itinerant teachers of the deaf and counselors of the deaf will travel from the Horace Mann Center to regular high schools

to provide supplemental tutoring and counseling. High schools served will need to provide office or conference room on a part-time basis.

b) Tutoring, counseling, and clinical services of the Horace Mann Center will be open to students who come to the Center after school from the high schools in which they are enrolled and utilize space in the Secondary Education Unit of the Evaluation Unit.

2) Secondary Education of the Deaf in the Madison Park Comprehensive High School:

The Madison Park Comprehensive High School intends to have four houses for approximately 1250 students each. It is recommended that facilities for deaf high school pupils be incorporated into two of these houses. Within each house, the 1250 students will be divided into five groups for maximal interaction with normally hearing high school peers. The program is designed to make courses and facilities of a comprehensive high school available to deaf high school students while providing any specialized academic instruction, tutoring and counseling they may require on the premises of the high school. For each house of 1250 students, four classrooms equipped to serve 32 students (eight per classroom) should be provided, along with space for specialized equipment and media, and space for individual tutoring and counseling. Four teachers of the deaf and a counselor of the deaf should be available full-time at the comprehensive high school. The program would permit both a resource room approach in some subject matter areas and separate classes for the deaf in academic subject matter if required, although it is expected that most deaf pupils will attend classes with their hearing peers and utilize the special classrooms for supplemental

assistance from a teacher of the deaf. The four teachers in each house unit should be able to provide high school level instruction in English, mathematics, social studies and science. The teachers and the counselor would assist deaf students in utilizing all levels of college, business and vocational curricula offered in the comprehensive high school.

3) Secondary Education Unit of the New Horace Mann Center:

A number of deaf students of high school age have been identified as needing programs other than those described in Section 1 and 2. These are deaf students who will require some type of academic program within the Horace Mann Center. These include:

- a) Students who have the academic potential for a high school diploma but for various reasons are not able to function in the Comprehensive High School (Section 2 above).
- b) Students who require vocational education in a vocational school or on-the-job training supplemented by continuing education in English, mathematics, etc., plus ongoing counseling.
- c) Students with multiple problems requiring continual special education beyond the programs of the elementary schools for the deaf.

It is recommended that eight classrooms similar to those for the Comprehensive High School be provided within the Horace Mann Center.

4) Living Quarters for Deaf High School Pupils:

Data from schools for the deaf indicate that some students requiring the Madison Park Comprehensive High School Program at the Horace Mann Secondary Education Program will live outside the Boston area such that they will be unable to commute from their homes. The number of pupils is not large and may vary greatly from year to year such that construction

of dormitories is not a feasible solution.

It is recommended that married-couple counselors be hired for the Horace Mann Center, as required, and that apartments or homes near the Horace Mann Center be leased to provide living quarters for deaf students under the supervision of the married-couple counselors.

During 1969-70, the project director worked with the Educational Planning Center on the consolidation of educational specifications of the Horace Mann Center with those of the new Washington Allston School. Teachers of the Horace Mann School, members of the Allston Special Education Committee, and staff of the Boston School Department Health Services, participated in conferences resulting in revisions of the Horace Mann Center educational specifications. As a result of this continued planning activity, a document entitled, A Proposal for the Washington Allston-Horace Mann School has been submitted to the Public Facilities Department of the City of Boston. An architect has been selected for the new facility. Copies of the proposal may be obtained from:

Educational Planning Center, Boston Public School
Washington Street, Roxbury, Massachusetts 02119

B. The Horace Mann Symposium on Deafness

During 1966-67, an official of the Title III Project programs in the United States Office of Education suggested to an official of the Boston Public Schools Educational Planning Center that a symposium on deafness would be an appropriate activity for the Horace Mann Title III Project. The project staff, aware of the fact that 1969 would mark the centennial of the Horace Mann School for the Deaf as the First Oral Public Day School for the Deaf in the United States, as well as the Charter Centennial of Boston University, which has been operating the

Horace Mann Title III Project, decided to hold a Symposium entitled THE WORLD OF LEARNING AND DEAFNESS on November 10-12, 1969, in conjunction with the November 10th anniversary of the Horace Mann School. It is also noteworthy that Alexander Graham Bell taught at the Horace Mann School for the Deaf and at Boston University during the years in Boston when he also invented the telephone.

A Program Advisory Committee met in Boston on January 17, 1969, and developed the theme and format for the three day Symposium. Through correspondence and telephone, the speaker-panelists were selected by the Advisory Committee and invited to participate. Over 400 persons from 27 states, Canada and England attended the Symposium. The program is given on the following pages.

CENTENNIAL CELEBRATION

THE HORACE MANN SCHOOL FOR THE DEAF

The First Public Oral Day School for the Deaf in the United States



Horace Mann Symposium

THE WORLD OF LEARNING AND DEAFNESS

November 9 – 12, 1969



BOSTON UNIVERSITY CHARTER CENTENNIAL

Communicative Disorders Section, School of Education

The Horace Mann Symposium on Deafness is being conducted as an activity of the Horace Mann Title III (ESEA) Project. The Symposium is planned to project thinking into the future of education for the hearing impaired, infancy through adulthood. Featured speakers from psychology, education, medicine, and technology will share problems and solutions with educators of the deaf through symposium talks, panel discussions and audience participation discussions. With two exceptions, all sessions will be held in the Boston University George Sherman Union.

Sunday, November 9

5:30-7:30 P.M.

RECEPTION

The Gardner Museum, The Fenway

Monday, November 10

8-8:30 A.M.

REGISTRATION

Stone Lobby, Sherman Union

8:30-9 A.M.

OPENING SESSION

Ballroom — Auditorium*

Chairman: Eileen Connolly, Principal, Horace Mann School for the Deaf.

Speakers: William Ohrenberger, Superintendent, Boston Public Schools.
Arland Christ-Janer, President, Boston University.
Neil V. Sullivan, Commissioner,
Massachusetts State Department of Education
Edwin Martin, Acting Associate Commissioner
Bureau for the Handicapped, U.S. Office of Education

*Closed circuit television viewing available in Auditorium.

Continuous

EXHIBIT

Alexander Graham Bell Memorabilia
and
Instructional Materials for the Deaf
TERRACE LOUNGE

Monday, November 10

9-10:30 A.M.

CHILD DEVELOPMENT, THE FAMILY AND SOCIETY
Ballroom — Auditorium*

Chairman: Patria Forsythe, National Advisory Council on Education of the Deaf

Speakers: Child Development: Jerome Kagan, Harvard University
Department of Social Relations

Sensory Feedback: Richard Chase, Johns Hopkins University
Neurocommunications Laboratory

Family and Adolescence: George Gardner, Judge Baker Guidance Center

Education and Society: Wilbur J. Cohen, University of Michigan
Dean, School of Education

*Closed circuit television viewing available in Auditorium.

10:30-11 A.M.

COFFEE
Ziskind Lounge

11-12:30 A.M.

SIMULTANEOUS DISCUSSIONS

Child Development: Ballroom

Moderator: Kevin Murphy, Royal Berkshire Hospital, Reading, England
Resource Panelist: Jerome Kagan

Sensory Feedback: Auditorium

Moderator: Barbara Beggs, Columbia University
Resource Panelist: Richard Chase

Family and Adolescence: Room 314

Moderator: D. Wilson Hess, Gallaudet College
Resource Panelist: George Gardner

Education and Society: Room 315

Moderator: Joseph Rosenstein, U.S. Office of Education
Resource Panelist: Wilbur J. Cohen

Teacher Discussants for 11-12:30 sessions on Monday and Tuesday.
Audience is encouraged to participate in discussions.

Dominic Di Battista	Mystic Oral School for the Deaf
Sister Joanne Feulner	St. Francis de Sales School for the Deaf
Janet Head	Lexington School for the Deaf
Ann Hennessy	Crotched Mountain School for the Deaf
Elsie Lindblom	Governor Baxter School for the Deaf
Brenda Lunna	St. Joseph's School for the Deaf, New York, N.Y.
Celia Petrucelli	Pennsylvania School for the Deaf
Viola G. Pratt	Clarke School for the Deaf
Edith Rosenstein	Horace Mann School for the Deaf
Carol Smith	American School for the Deaf
Donna Spang	Rhode Island School for the Deaf
Sister Teresita	Boston School for the Deaf
Ruth Ann Thomson	Marie H. Katzenbach School for the Deaf

Monday, November 10

12:45-2:30 P.M.

LUNCHEON

Cafeteria, Bay II, Dining Room A.

2:30-4 P.M.

PANEL: CHILD DEVELOPMENT, THE FAMILY AND SOCIETY

Ballroom — Auditorium*

Moderator: Edgar Lowell, John Tracy Clinic

<i>Panelists:</i> Barbara Beggs	D. Wilson Hess
Richard Chase	Jerome Kagan
Wilbur J. Cohen	Kevin Murphy
George Gardner	Joseph Rosenstein

8-9:30 P.M.

THE ROLE OF PARENTS

Ballroom — Auditorium*

Chairman: Lois Odle; President, Home and School Association of the Horace Mann School for the Deaf

Speakers: Thomas Behrens, Gallaudet College — Kendall School for the Deaf
Darryln Danahy, Mother of a young deaf child.

Robert Danahy, Massachusetts Parents Association for Deaf and Hard of Hearing

Patria Forsythe, National Advisory Council on Education of the Deaf

*Closed circuit television viewing available in Auditorium.

Tuesday, November 11

9-10:30 A.M.

EDUCATIONAL INTERVENTION AND CURRICULUM DEVELOPMENT
Ballroom — Auditorium*

Chairman: George Fellendorf, Alexander Graham Bell Association for the Deaf

Speakers: *Curriculum:* John Michaelis, University of California, Berkeley
School of Education

Language Learning: David McNeill, University of Chicago,
Department of Psychology

Behavioral Intervention: James Holland, University of Pittsburgh,
Learning, Research and Development Center

Technology: James Flanagan, Bell Telephone Laboratories
Acoustic Research

*Closed circuit television viewing available in Auditorium.

10:30-11 A.M.

COFFEE
Ziskind Lounge

11-12:30 A.M.

SIMULTANEOUS DISCUSSIONS

Curriculum: Ballroom

Moderator: Sister Marie Suzanne Buckler, St. Joseph Institute for the Deaf
Resource Panelist: John Michaelis

Language Learning Auditorium

Moderator: Jean Utley Lehman, California State College, Los Angeles
Resource Panelist: David McNeill

Behavioral Intervention: Room 314

Moderator: Ross Stuckless, National Technical Institute for the Deaf
Resource Panelist: James Holland

Technology Room 315

Moderator: Frank Withrow, U.S. Office of Education
Resource Panelist: James Flanagan

Tuesday, November 11

12:45-2:30 P.M.

LUNCHEON

Cafeteria, Bay II, Dining Room A

2:30-4 P.M.

PANEL

EDUCATIONAL INTERVENTION AND CURRICULUM DEVELOPMENT

Ballroom — Auditorium*

Moderator: Ross Stuckless, National Technical Institute for the Deaf

<i>Panelists:</i>	Sister Marie Suzanne Buckler	John Michaelis
	James Flanagan	David McNeill
	James Holland	Frank Withrow
	Jean Utley Lehman	

6 P.M.

CENTENNIAL DINNER OF HORACE MANN SCHOOL FOR THE DEAF

Museum of Science

Speaker: Ann Mulholland

Wednesday, November 12

9:30-11:30 A.M.

A LOOK AT THE FUTURE

Ballroom — Auditorium*

Chairman: George Pratt, Clarke School for the Deaf

Speakers: Conference Summary: Harriet Kopp, Detroit School for the Deaf

The Role of Government: Edwin Martin, U.S. Office of Education

The Future: S. Richard Silverman, Central Institute for the Deaf

The New Horace Mann Center: William Tobin, Deputy Superintendent,
Boston Public Schools

*Closed circuit television viewing available in Auditorium.

CREDITS

This Symposium was made possible primarily through a grant from the U.S. Office of Education under provisions of Title III, E.S.E.A. The program outlined and the opinions expressed by Symposium participants do not necessarily reflect the position or policy of the U.S. Office of Education.

Additional support for the Symposium, in the form of financial grants, use of facilities, and services was provided by

The New England Telephone Company
The Speech and Hearing Foundation of Massachusetts
Registration Fees of Participants
Boston Public Schools
New England Materials Instruction Center
Boston University Charter Centennial Committee

Local Arrangements and Hospitality:

Teachers and Pupils of Horace Mann School for the
Deaf and Evaluation Unit
Boston University Sherman Union Program Office and
Staff
Graduate Students of Boston University — Boston
School for the Deaf Program to Prepare Teachers
of the Deaf
Parents and Alumni of Horace Mann Home and School
Association

Program Planning Advisory Committee:

Eileen Connolly	Ann Mulholland
George Fellendorf	Albert Murphy
Patria Forsythe	Wilbert Pronovost
Herbert Forsell	Edith Rosenstein
James Gallagher	Joseph Rosenstein

C. Summer Adolescent Program, 1968

An eight-weeks summer program was conducted for deaf adolescents. The program was based on a pattern developed by Lawrence and Viscovi.⁽¹⁾ The goals of the program were to provide cultural enrichment and social-recreational experiences for deaf adolescents whose teachers and/or parents felt they could benefit from such experiences.

The "headquarters" for the program was St. Andrew's Mission for the Deaf, 18 Williston Road, Brookline, Massachusetts, which had social-recreational facilities and space for pre-vocational experiences.

A description of the program was sent to schools for the deaf in New England which were known to have students from the Metropolitan Boston area, with the request that interested students be referred to the program.

The Participants: A total of thirty-six inquiries were received, primarily from parents; only nine adolescents participated in the entire summer program; a few adolescents attended parts of the program for shorter periods of time.

The age range of the participants was twelve years six months to twenty-one years. There was also a wide range in amount of hearing loss, varying from good hearing with amplification to profound deafness. One boy was quite introverted, a condition which lessened during the weeks of

1. Lawrence, C. and Viscovi, G. "The Deaf Adult Project": A Report of Project N. RD-1576-S, Social and Rehabilitation Services, U. S. Office of Health, Education and Welfare, 1968.

the program.

The participants were students from three schools for the deaf, two in the Boston area. Some had recently graduated and would seek employment; most would return to school in the fall.

Work Experience: A primary goal was to provide a type of work experience that would serve as education-for-work and provide an opportunity to relate language and mathematics to vocational situations. Three of the adolescents were placed in part-time positions at the Morgan Memorial Goodwill Industries in office-type positions. They worked during the morning and returned to the headquarters on sub-contract jobs which had been obtained through placing an advertisement in the Boston Globe. Two sub-contracts involving sub-assembly work were obtained from Burtman Iron Werds and Chadwick-Miller, Inc. The deaf adolescents performed the work under the supervision of the project staff and were paid the full amount of the funds received from the sub-contractors.

Besides the actual work, the students were taught other aspects of employment. Since three of the students were under age 16, simulated Social Security information, etc. was provided. All of the students were taught the principles of hourly wages, Social Security, withholding taxes, incentive bonuses, etc. This program provided considerable opportunity for instruction in applied mathematics and language usage.

Photographs of participants in selected work experiences and other activities are shown on the next page of this report.

Field Trips: Another aspect of the program involved several field trips to provide enriching experiences for the students. Discussions and appropriate instruction preceded and followed each field trip. Included among the field trips were the Boston Globe, the Sandwich Fish



ADOLESCENT
PROGRAM

Hatcheries, the Museum of Science, Fenway Park and the National Theater for the Deaf in Waterford, Connecticut.

Social-Recreational Activities: At least two afternoons a week, the students went to a local playground for physical activities. They viewed films procured from Captioned Films for the Deaf. They used a nearby MDC swimming pool. There were also opportunities for oil painting and reading under staff supervision.

Many games were played which were educational in part: Monopoly, Scrabble, Password. These games were closely supervised and used as educational tools for language development.

Evaluation of the Program: The number of students served would have been greater if the program had been announced earlier. Several prospective participants had already arranged for summer programs in schools and camps. Earlier planning would also have produced more sub-contract work. As a result of continued activity by the staff, a list of prospective sub-contractors has been developed for future reference.

The unique feature of the program was the provision of work experiences. This feature permitted the staff to introduce adolescents to vocational opportunities and responsibilities. The students learned that there are boring and interesting jobs; that one gets paid for work done and time put in; that one must cooperate with fellow workers. All of these concepts had to be taught during the work experiences; none of the students planned to leave school as early as possible and "get a good job," with no plans for any vocational training. It was the opinion of the staff that most of the students exhibited vocational potential and that they would be able to secure meaningful employment if they first furthered their education. The staff did its best to communicate this

idea both to the students and to their parents.

A meeting of parents and staff at the end of the eight week program revealed that the parents were well satisfied with the program. Parents observed changes in attitude and emotional maturity. Some parents and adolescents had made decisions for further education appropriate to the adolescent's abilities.

In general, the work experience phase of the program appears to be needed by many deaf adolescents. Although many aspects of the pre- vocational experiences could be provided during an academic year in school, the daily work experiences and related academic instruction might be more effective in an intensive summer program of the type conducted by this project, utilizing sub-contracts as the basis for obtaining work for the participants.

D. Adult Education Program

The Speech and Hearing Foundation of Massachusetts, a private non-profit organization, has been providing a program of adult education for the deaf for several years. The Title III Project director participated in the course in Dactylogy (sign language) and involved deaf and hearing members of the Foundation in planning of the adult education program proposed for the new Horace Mann Center.

Beginning in September, 1968, through cooperation with the Boston School Department of Adult Education and Recreation, the classes conducted by the Speech and Hearing Foundation have met in the Taft Junior High School Adult Center, in the Brighton-Allston section of Boston where the new Horace Mann Center, is scheduled to be built. This was another step in closer cooperation between the Speech and Hearing Foundation and the Horace Mann Project to expand adult education programs

ADULT EDUCATION FOR THE DEAF

Speech and Hearing Foundation of Massachusetts



Sewing

Floral Arrangement



Key Punch Operation



Fashion and Styling

Dactylology

for the deaf. The program of courses offered during the 1968-69 school year included English, mathematics, postal clerk/carrier tutoring, speech improvement, lipreading, dactylology, floral arranging, fashion and styling, home interior crafts and acting workshop.

Instructional salaries were paid from Speech and Hearing Foundation Funds. The instructor's salary for the postal clerk/carrier tutoring was paid by the Massachusetts Rehabilitation Commission. After two terms of instruction, the Speech and Hearing Foundation Program Director arranged for the nine deaf adults to take a special Civil Service Examination. The Civil Service Examiner was assisted by an interpreter using sign language. This was the first time such an examination was given. Six deaf adults received passing grades on the examination and were placed on the Civil Service list.

During the Spring Term of the 1968-69 year program, the Title III Project employed a clinical teacher of the deaf on a part-time basis to serve as an educational counselor for the deaf adults.

In 1969-70, a male educational counselor for deaf adults was employed by the Speech and Hearing Foundation.

Project staff members, through a review of books, articles, and reports, by attendance at national conferences, and participation in the adult education program for the deaf, were able to identify needs of deaf adults for future programming.

Recommendations for future programs include:

- 1) There is a need for greater involvement of deaf adults and the various clubs and organizations for the deaf in the planning and conduct of a program for deaf adults.
- 2) A program of adult education should make possible the acquiring

of a high school diploma by deaf adults who are capable of achieving it.

3) Instruction in manual communication should be provided for deaf adults in need of such instruction and for hearing adults who may be needed to serve as interpreters, counselors, and teachers.

4) The Adult Education Unit should provide a program of tutoring for students capable of pursuing a college career.

5) A program for acquainting deaf adults with educational opportunities available and for encouraging them to take advantage of these opportunities must be developed.

6) The Adult Education Program should be coordinated with rehabilitation programs for deaf adults through public and private agencies concerned with rehabilitation.

7) Mental health services should be provided to acquaint deaf adults with new developments such as the new telephone devices which permit deaf adults to communicate by telephone.

8) The use of television in the education and recreation of deaf adults and in the education of the public concerning deafness should be explored.

10) In order to remedy the situation of inappropriate or under-employment the following recommendations were made:

- a) Improved vocational training for the deaf is needed. The emphasis should be on white collar and service jobs because blue collar jobs are on the decline. The deaf should be provided with skills superior to those of their hearing competitors.
- b) Educational and vocational counseling for the deaf should be provided. Counseling is needed to help the deaf achieve realistic vocational objectives in terms of their capacities and

opportunities. The deaf also require counseling to help them in presenting qualifications during job interviews; to understand the expectations of their employers and the obstacles to their upgrading; to determine the best manner of communicating with the job supervisor and fellow workers; to become aware of opportunities for job training; and the desirability of taking adult education courses, particularly in language and communicative skills.

c) Interpreters for the deaf are needed to assist in job interviews.

During 1969-70, the executive director of the Speech and Hearing Foundation Adult Education Program conducted a pilot program in manual communication for two deaf boys and their parents and siblings, in order to provide manual as well as oral communication systems in the homes of the two boys whose oral communication skills were minimal. All family members and one of the two boys developed good proficiency in communication. Further experimentation is necessary with this program for families of children experiencing difficulty with oral communication.

Also, during 1969-70, the project director, serving as an adviser to the Speech and Hearing Foundation and a member of the Board of Directors of the Boston Guild for the Hard of Hearing, participated in community activities which has resulted in the formation of the Massachusetts Council of Organizations Serving the Deaf. During the year, monthly organization meetings were held, a constitution and by-laws prepared, and officers and a board of directors were elected. Twenty organizations, mostly comprised of deaf adults, make up the membership of MCOSD, which will be directed particularly to those areas not served by existing organizations for the deaf.

VI. DISSEMINATION

Although dissemination was not a major objective of the project, and was not carried on in a systematic manner, many types of dissemination activities occurred during the three years of the project.

Copies of the 1966-67 Planning Project Report and the Interim Reports of the Pilot Operational Project for 1967-68 and 1968-69, were distributed to local, state, and federal educational agencies and to individuals upon request. Almost two hundred copies of each report were distributed to persons in nineteen states and five foreign countries. The 1966-67 Planning Project Report was abstracted by ERIC and is available from the CEC-ERIC in hard cover and on microfilm.

Project staff members gave talks to parent, teacher, and other professional groups at local, regional, and national conferences. Thirty talks were presented in the three year period including an hour and a half session of the 1970 Summer Conference of the Alexander Graham Bell Association for the Deaf in Philadelphia. Talks were also given to students enrolled in several courses at the Boston University Graduate School of Education.

Visitors came to the Evaluation Unit as individuals and in groups. Groups included staffs of hospitals, students from universities, and special personnel of school systems. Individuals came from several states. A few visitors were from other countries.

The project was represented in the Massachusetts Creative Education Faire by an exhibit of innovative furniture and equipment in 1969 and a photographic exhibit in 1970. The photograph exhibit was also displayed

in the Boston University School of Education Lobby in June, 1970.

Dissemination through the conduct of the national Symposium on Deafness occurred through the mailing of 3000 announcements of the Symposium, the attendance of 400 persons at the Symposium and the availability of loans of audio tapes of Symposium Sessions from the Volta Bureau in Washington, D.C.

Brief scenes of activities in the Evaluation Unit have been included in the Boston University Charter-Centennial Film and the film series International Education of the Deaf.

News releases of project activities appeared in Boston papers periodically.

A description of the project is included in Kaleidoscope, Volume 2, Spring, 1970, published by the Bureau of Curriculum Innovation, Massachusetts State Department of Education.

The project was also listed as one of five exemplary projects in Programs for the Handicapped, a PACE Bulletin on Supplementary Centers and Services for the Education of Handicapped Children, United States Department of Health, Education, and Welfare, April 17, 1970.

VII. EVALUATION OF THE PROJECT

Evaluation of the Project was undertaken through a process of self-evaluation by the project staff at the end of the third year, and by questionnaires sent to referring agencies, teachers, and parents of the children served.

A. Self-Evaluation by the Project Staff: Self-evaluation was undertaken through use of the Form for Final Appraisal included in A Comprehensive Model for Managing an ESEA Title III Project from Conception to Culmination.* Each member of the professional staff of the project responded to the appropriate items of the form and responses were compiled by the project director, who also responded to the appropriate sections. The remainder of this section summarizes the staff's evaluation according to the major topic headings of the Final Appraisal Form.*

1. Objectives. The project staff judged all of the objectives stated on page 2 of this report as very appropriate at the end of the project. However, not all objectives were achieved during the project. Objective A, comprehensive educational evaluation of children, was achieved with a high degree of success. Some special programs and classes (Objective F) were originated by the project and continued by the Horace Mann School for the Deaf as permanent programs of the school. Objectives B, C, D, and E were only partially achieved. Objective G was not achieved at all, as the coding technique attempted could not be applied

*Report No. 3, Second National Study of PACE, Washington, D.C.
ERIC Document Reproduction Service, ED025859. EA001996.

to the specific problems of the population of children evaluated.

2. Programs. New programs developed were A Parent Education Program, A Class for Hard of Hearing Children, A Class for Deaf-Retarded Children and Audiological Services for all children in the Horace Mann School for the Deaf.

New programs needed for the future as a result of the project experience were listed by the project staff as:

- a) Procedures and staff for implementation of project objectives not achieved, especially trial teaching, individualized services and follow-up consultations.
- b) A public relations program for the purpose of identifying and initiating new programs throughout the state.
- c) A public relations program to encourage earlier referral and identification of hearing impairments in "high-risk infants" by the medical profession.
- d) More classes for the hard-of-hearing in public schools.
- e) Development of classes for deaf multiply-handicapped children, especially in learning disabilities, emotional disturbances and mental retardation.
- f) Educational guidance and counseling programs for parents of deaf adolescents.
- g) Availability of medical consultants for the Evaluation Unit in the specialties of Pediatrics, Psychology, Otolaryngology, Ophthalmology, and Neurology.
- h) New and improved curricula in the Horace Mann School for the Deaf for deaf and multiply-handicapped deaf children.
- i) University programs to prepare teachers of deaf multiply-

handicapped children and other professional personnel for inter-professional teams.

j) Experimental programs for children who appear to need teaching approaches using finger spelling and sign language.

Some programs, not listed in the Objectives of this pilot operational project, but related to continued planning of the new facility and other programs initiated during the planning project year, were conducted by the project director with community and professional groups other than the Educational Evaluation Unit staff. These are described in Chapter V of this report and were judged to be successful by the persons involved.

3. Demonstration. Demonstration, as defined in the Final Appraisal Form, was not an objective of the project.

4. Dissemination. Dissemination was not undertaken systematically. No evaluation was made of the effectiveness of the various means of dissemination actually used.

5. Implementation. The objectives of the project included concern for the implementation of the recommendations of the evaluation of each child. One aspect of implementation involved the conduct of pilot programs. Four pilot programs initiated by the Title III Project were absorbed as regular parts of the Horace Mann School. Some recommended programs were not implemented by either the Title III Project or the Horace Mann School for the Deaf.

The response of the teachers and school administrators to the recommendations for modified classroom placement or instruction for individual children in their own schools varied. In the Horace Mann School for the Deaf, many recommendations for the management of children were not accepted

or acted upon. In other schools, the personnel seemed receptive to the recommendations, but the Title III Project staff did not provide the follow-up necessary to determine if the recommended teaching procedures had actually been implemented.

Implementation of recommendations for specific children also required that the Evaluation Unit staff find new educational placements. Educational placements were found for most of the "difficult to place" children. However, in some instances, the staff judged these placements to be "inappropriate, but the best available."

6. Terminal Consideration. The project staff, and the City of Boston, gave serious consideration to the terminal aspects of the three year operational project. The Evaluation Unit developed by the Title III Project has been absorbed into the existing Horace Mann School for the Deaf and will continue to operate under local funding and state reimbursement, as a regional evaluation unit.

7. Management. Staff members of the educational evaluation team felt that the over-all program was too loosely defined and that the first year of the project should have been devoted to developing a method of procedure for working with the teachers and administrators of the Horace Mann School for the Deaf so that each understood his role, procedures and relationship. Communication within the project staff was hampered by the part-time involvement of some personnel (psychologist, nurse, director). The staff felt that the project director (who was involved in many other project activities) was not available to deal with the problems which arose in relation to implementation of staff recommendations and problems requiring administrative responsibility and authority. Improved communication and administrative procedures are

essential as the project continues. These procedures should be designed to increase efficiency of staff in serving more children.

8. Relationships. Relationships with outside agencies and schools were judged as excellent. Relationships within the Horace Mann School were judged as good on a personal basis, but poor on a professional basis with disagreements on testing procedures for specific children. Intra-staff relationships were good, although the frustrations resulting from failure of implementation of educational evaluation recommendations, affected staff morale, especially in the third year.

9. Budget. Budgeting and bookkeeping were undertaken by the project director, the Educational Planning Center of the Boston Public Schools and the Boston University Office of Sponsored Research. Monthly records were kept of all expenditures. Budgets were realistic, but seriously affected by the large cut in Title III funds for the third year, compared to the amount originally anticipated for the third year.

10. Facilities, Equipment, Materials. Facilities, which were remodeled specifically for the project, and new equipment and materials purchased for the project were rated by the staff as good. However, the delay in preparing specifications for remodeling and in purchasing equipment was such that the facilities and most equipment were not available during the first year of the project. Technical problems were encountered with the video tape recorder and it was not used as effectively or extensively as planned. The facilities and equipment will be used as the project continues under local auspices.

11. Evaluation. The project personnel seriously considered the effectiveness of the project at the end of each year. New administrative procedures and definitions of project staff and Horace Mann School functions

are mandatory if the objectives not attained during the pilot project are to be achieved. Procedures for follow-up of recommendations are essential in order to evaluate the effectiveness of the recommendations made by the educational evaluation team.

3. Evaluation by Teachers, Agencies and Parents: Evaluation questionnaires were developed to determine teachers', agencies' and parents' opinions of the effectiveness of the Horace Mann Evaluation Unit. The questionnaire forms may be found in Appendix D of this report. The twenty-five teachers of the Horace Mann School for the Deaf returned the questionnaires. Of the 94 questionnaires sent to referring agencies and schools, 56 were returned. Of 116 questionnaires sent to parents, 53 were returned. Since only about 50% of the referring agencies or parents replied to the questionnaires, caution must be exercised in interpreting the results.

The written reports of the educational evaluation and the recommendations made for the child, were rated as helpful and useful by the majority of respondents. Six responses from referring schools, three from parents, and two from Horace Mann School teachers stated that the report was not helpful nor the recommendations useful.

Attitudes toward the Evaluation Unit in terms of interpersonal and interprofessional relationships were rated by referring schools and agencies as favorable, 40, and unfavorable, 6. In rating their impressions of the Evaluation Unit, 30 parents stated that they were pleased, 19 satisfied and 4 not satisfied. Teachers at the Horace Mann School tended to rate interpersonal relationships with the Evaluation Unit staff as good, but identified some interprofessional conflicts. Five teachers' comments were indicative of peer relationships.

A small proportion of teachers, agencies and parents responded to questions related to the uniqueness of the Evaluation Unit's functions in providing services in other settings. A statement made by several respondents was that the Evaluation Unit provided a more comprehensive, educationally-oriented evaluation with a greater understanding of the "whole child" and his family.

All three groups were asked to indicate how the Educational Evaluation Unit's services could be improved or expanded in the future. All groups identified the need for greater involvement of the teacher and the classroom through evaluation in the classroom in consultation with the teacher, teacher involvement in the Evaluation Unit as a member of the evaluation team, increased assistance to teachers in explaining recommendations and implementing them in the classroom and through supplemental individual tutoring. Parents also expressed a desire to observe more of the evaluation sessions. Teachers of the Horace Mann School expressed a desire for more personal and professional contacts through planned staff conferences on in-service education. They also indicated the necessity for more coordinated administration of the school and the Evaluation Unit through clearly stated administrative procedures and definition of professional roles.

Recommendations were also made for expansion of staff and facilities to provide services for more children, especially those enrolled in day classes for the deaf, and for the establishment of similar evaluation services in western Massachusetts. It was recommended that the evaluation services be available of a year-round basis.

All groups emphasized the need for establishment of new programs for deaf children with multiple handicaps within the State of Massachusetts.

Also recommended was a public relations and publicity program to identify and report the needs of children not served by existing programs. Additional programs for hard-of-hearing children were mentioned as necessary.

In summary, it appears that the educational evaluation process was successful, but that much more needs to be done by way of teacher involvement, new administrative procedures, new programs throughout the state and more public relations and publicity before all of the originally stated objectives of the project can be achieved.

VIII. SUMMARY

A Title III, Elementary and Secondary Education Act of 1965, Project was conducted by the Boston Public Schools in cooperation with the Boston University School of Education, in 1967-70, as a pilot operation of an educational evaluation and programming unit for children with known or suspected auditory dysfunction. The pilot project was preceded by a one-year planning grant to develop specifications for a new comprehensive center for communicative disorders. In addition to the pilot evaluation unit, other activities initiated during the planning year were continued as secondary functions.

The educational evaluation and programming unit was conducted by an interprofessional staff providing comprehensive educational evaluation of children with known or suspected hearing impairment who were referred by teachers or agencies as presenting problems of learning in their educational setting or for whom advise was desired on new educational placements. The comprehensive educational evaluation was designed to provide recommendations for teachers in the management of the child in their classrooms or for recommendations for new educational programs or placements.

The interprofessional team included clinical teachers of deaf and aphasic children, an audiologist, a speech pathologist, a nurse, and psychologists. Evaluations were conducted over an extended period of time, using a battery of formal and informal tests, with members of the evaluation team interacting regularly at all phases

of the evaluation and often observing children as they were being evaluated by other members of the team. The evaluation process involved cognitive, communicative and affective functioning of the child in the areas of Physical Factors: Health, motor coordination, vision audition, Voice, Speech and Language: Inner language, receptive language, expressive language, and Psycho-Social Factors: Cognitive functioning, affective behavior. Medical, developmental and educational records were examined in detail. Parent interviews dealt with development and family relationships. Staffing sessions occurred informally during the evaluation process which involved several sessions. Formal staffing sessions were held at the end of the evaluation process and included referring teachers or administrators whenever feasible.

The evaluations were conducted in an especially designed, equipped and remodeled facility in the Horace Mann School for the Deaf, Boston, Massachusetts. Children from the Horace Mann School for the Deaf and from other schools and clinics in Massachusetts were evaluated.

Extensive reports of the evaluation were prepared and sent to referring teachers, schools and clinics, supplemented by personal or telephone conferences.

The children referred for evaluation were found to have multiple learning and behavior problems in addition to the auditory dysfunction. Usually the profound hearing problems, cultural, environmental and educational deprivation, learning disorders associated with probable central nervous system dysfunction, and sometimes mental retardation.

However, there was no "typical" child other than the tendency for multiple problems to exist. It was not possible to establish primary and secondary disabilities -- the combination of problems of a child were interesting with each other in their impact.

In making recommendations concerning a child, the evaluation unit staff usually found that teachers were unable to implement many of the recommendations because children required individual approaches which were not feasible within the responsibilities of a classroom teacher, were sometimes in areas of disability different from the teacher's area of specialized training, or were not feasible administratively. Often, the recommendations indicated educational procedures which were not available in the schools, or educational placements in new school settings which were not in existence. Although the teachers found most of the evaluation unit's reports helpful, both the teacher and the evaluation unit staff found many educational placements as "inappropriate but the best available."

As a result of the problems presented by the children evaluated, several new programs were inaugurated by the Title III Project which were later incorporated into the regular program of the Horace Mann School for the Deaf. These included the development and revision of educational design specifications for the new Washington Allston-Horace Mann Schools to be constructed in the near future, in cooperation with the Boston Public Schools Educational Planning Center, the teachers and administrators of the Horace Mann School for the Deaf, parents and others in the Allston community, and an advisory committee on secondary education of the deaf from private schools and the Bureau of Special

Education. The concept of the Evaluation Unit was Broadened to include all children who will attend the new Allston-Horace Mann Schools.

A national symposium, The World of Learning and Deafness, was conducted November 10-12, 1969, in conjunction with the centennial celebrations of the Horace Mann School for the Deaf and Boston University. Four hundred persons from twenty-seven states, England and Canada attended the symposium.

Cooperation was developed with the Speech and Hearing Foundation of Massachusetts in the Foundation's program of adult education for the deaf. Use of Boston School Department facilities and an expanded adult education program has resulted.

The effectiveness of the Title III Evaluation Unit was evaluated by means of self-evaluation and by questionnaires sent to teachers, parents and referring agencies. The most successful aspect of the project was judged to be the interprofessional team's educational evaluation. Implementation of the recommendations of the evaluation team regarding individual children was only partially successful.

As a result of the conduct of the three year pilot project, the following recommendations are made for future operation of the Evaluation Unit:

- 1) Revised administrative procedures are needed to improve the interaction between the evaluation unit staff and referring school personnel.
- 2) Greater teacher involvement in the evaluation process is essential.
- 3) The evaluation unit personnel must be available to assist teachers in implementing recommendations and providing supplemental

individual services. Schools must make administrative provision for teachers to interact with consulting evaluation unit staff.

4) More provision must be made for individualizing the teaching of hearing impaired children, many with multiple learning and behavior problems.

5) New types of classes and schools are needed for a wider variety of hearing impaired children.

6) A public relations program is required to encourage earlier identification and referral by the medical profession of "high risk infants," and for the development of expanded educational evaluation services and new educational settings for multiply-handicapped hearing impaired children.

7) New university teacher preparation programs are required to prepare teachers for the multiple problems being presented by a large population of hearing impaired children.

More detailed listing and discussion of recommendations may be found in Chapters IV and VII of this report.

APPENDIX A

STAFF

Project Director:	Wilbert Prenovost, Ph.D., 1967-1970
Coordinator of Clinical Services:	Tanya MacLennan, M.Ed., 1967-1970
Audiologist:	Nancy Miller, M.A., 1967-1970
Clinical Teacher of the Deaf:	Sharon Smith, M.Ed., 1968-1970 Susan Spiritus, M.Ed., Spring, 1968 John Carroll, M.Ed., Summer, 1968 Lewis Gaffen, M.Ed., Summer, 1968 Ann McIntyre, B.S., Summer, 1968 Clifford Lawrence, M.Ed., Spring, Summer, 1968
Clinical Teacher of Language Disorders:	Peggy Kelso, M.Ed., 1968-1969
Nurse:	Norah Preston, R.N., B.S., 1967-1970
Research Assistants (Aides):	Alice Train, M.A., 1967-1970 Judith Gough, Summer, 1968
Secretary:	Charlette Carr, 1967-1969 Pamela Gare, B.A., 1969-1970 Susan Grieger, B.S., 1969-1970 Leana Hoylman, B.A., Summer, 1970
Consultant Psychologists:	Leon Brenner, Ph.D., Fall, 1967 Richard Thompson, Ph.D., Fall 1967 Miriam Fiedler, Ph.D., Spring, 1968 Caroline Fish, Ed.D., 1968-1969 Edward Herbert, Ph.D., 1968-1970

APPENDIX A

Participating Personnel from Horace Mann School for the Deaf:

Principal:	Eileen Connolly, M.A. 1967-1970
Assistant Principal:	Edith Rosenstein, M.Ed. 1967-1970
Parent Education:	Rosalie Gabel, M.A. 1967-1970 Patricia Bonneau, M.Ed. 1968-1969
Language Disorders:	Martha Wahl, M.Ed. 1968-1969
Counseling and Placement:	Charles Healey, 1968-1970
Clinical Teaching:	Jane Minch, M.Ed., fall, 1967

APPENDIX B

FACILITIES AND EQUIPMENT

The Title III Project (Evaluation Unit) is located on the ground floor of the Horace Mann School for the Deaf in Boston. Two large rooms (20' x 50' each) and a small office were renovated for use by the Evaluation Unit. Renovation involved designs of areas to suit the functioning of the educational evaluation process. One room, the educational evaluation area, was renovated to include an informal lounge for parents and children immediately adjacent to a psychological examination room, a two-room sound-controlled audiology suite supplied by Industrial Acoustics Corporation, and a tutoring booth for individual assessment designed by the project staff. The other room was renovated as an educational programming area. Photographs in Chapter III show activities of children, staff and parents in the facilities.

Design of the Educational Programming Area:

During the Planning Project in 1966-67, meetings of the teachers of the Horace Mann School for the Deaf, the Project Director and Bertman Berenson, Consultant Architect, resulted in the development of specifications and preliminary sketches for tutoring booths and study desks for the educational programming area of the Title III Operational Project. During the 1967-68 year, the design of these units was finalized and the units were constructed in Hampton, Virginia, by a cabinet maker under the supervision of architects, Bertman Berenson and R. N. Piland, Jr.

The units were installed in the educational programming area.

Photographs of the area and units appear on the next page of this report.

The experimental study desks and tutoring booths were developed from discussions with teachers concerning the learning-teaching activities of the classroom. Among the needs which might be met by appropriate design of instructional areas and furniture were:

- a. The need for face-to-face visual communication between child and teacher.
- b. The need for a variety of learning-teaching activities in the same classroom.
- c. The need for a child to receive individual instruction from the teacher or special tutor in an area of the classroom.
- d. The need for partial visual separation from the classroom for tutoring activities and for control of acoustics of the entire area.
- e. The need for a child to engage in independent study and learning with opportunity for occasional assistance from a teacher.

The units designed to meet these needs are tutoring booths and study desks installed within the classroom itself. The need for face-to-face visual communication between child and teacher was provided for by designing desk-tops at a height comfortable for teachers, with a platform for a child to bring him to the comfortable sitting height in relation to the desk tops.

The tutoring booth is a three-sided booth with flooring and roof into which a table and benches of appropriate heights for teachers and child are constructed. The sides of the booth are inserted into slots of the floor unit without bolts. The roof slots fit over the sides pro-

viding strength but easy assembly and dis-assembly to relocate the booths if required. Only the table and benches require assembly with bolts. The walls, floor and bench seats are carpeted for sound absorption. The ceiling is acoustically treated, with a lighting fixture for self-contained lighting. An electrical outlet is provided in the floor of the booth for audio-visual equipment. A power cord plugged into any wall outlet of the classroom provides electrical power for the lights and outlet.

By use of a book cart with a wide top shelf, a teacher can prepare teaching-learning materials and audio-visual equipment prior to a session with a child and then roll the cart to the booth. All materials are in easy reach of the teacher and child. Rear-view screens for slides, film strips, or film-loops are at eye level for child and teacher.

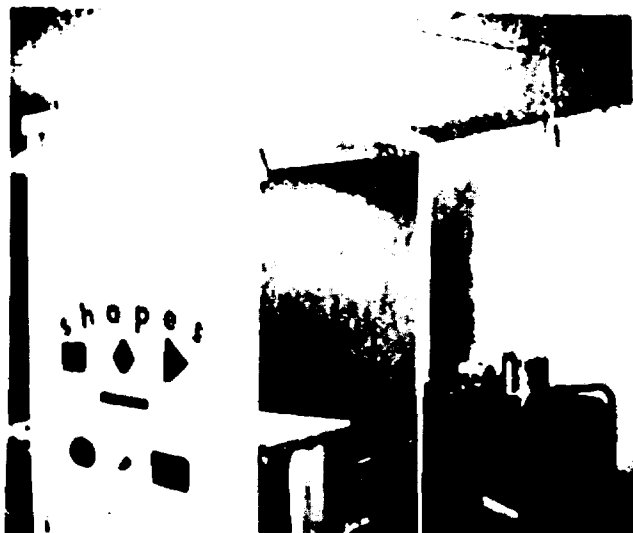
The study desks are so designed that the teacher can easily view a child's seat work while moving from desk to desk. The unit is built on a platform to provide a comfortable seating height for a child. Each child has a substantial desk area at which to work and a blackboard which also serves as one side of the unit. The blackboard may be placed at the child's left or right and can be used for partial visual separation of children from each other. The railings around the platform provide for safety and strength of construction, but also provide limits to the child's movements during study activities.

Equipment

The Evaluation Unit was well equipped with all types of instructional media and materials. The Audiology Suite had pure tone and speech audiometers, a narrow band masking unit and a tape recorder. The educational programming area had an EPI Wireless Auditory Training System,



STUDY DESKS



TUTORING BOOTHS

EDUCATIONAL PROGRAMMING AREA

overhead projector, slide projector, filmstrip projector, cartridge loop projector and Audio-Flashcard Unit.

A closed circuit television system provided for three video cameras and micerphones which could be mounted in six different locations and fed through a patch-panel to video monitors and an Ampex Video Taperecorder.

Testing Materials

Among tests used in the educational assessment were:

Wechsler Intelligence Scale for Children

Wechsler Primary and Pre-School Scale of Intelligence

Wechsler Adult Intelligence Scale

Leiter International Performance Scale

Stanford Binet Intelligence Test

Cattell Infant Intelligence Test

Sequin Formboard

Ravens Progressive Matrices

The Porteus Maze Test

Bender Visual-Motor Gestalt Test

Goodenough Draw a Man Test

Developmental Test of Visual Perception (Frostig Test)

Illinois Test of Psycholinguistic Abilities

Cheves Visual-Motor Development

Eric Program (Perceptual Motor Development)

Ayres Space Perception Test

Sentence Completion Test

Selected Items from Cattell, Gesell and Vineland Tests

Weigl Goldstein-Scheerer Color and Form Sorting Tests

Picture Story Language Test

Peabody Picture Vocabulary Test

Durrell Analysis of Reading Difficulty

First Grade Screening Test (Boys and Girls)

Stanford Achievement Tests (Arithmetic and Reading)

Doren Diagnostic Reading Test

Screening Tests of Identifying Children with Specific Language
Disabilities

APPENDIX C-1

AUDITORY FUNCTIONING OF NURSERY AGE CHILDREN EVALUATED IN 1967 - 1968

<u>Degree of Loss</u>	<u>ISO db Loss</u>	<u>Number of Children</u>
mild	37-54	4
moderate	55-76	10
severe	77-94	9
profound	over 95	8

The age at which the children received hearing aids is tabulated below:

<u>Age (in months) of Receipt of Hearing Aid</u>	<u>Number of Children</u>
12-17	6
18-23	1
24-29	4
30-35	10
36-47	7
over 48	2

The initial hearing testing and recommendations for hearing aids were made by audiologists in medical centers. The time lapse between first contact with the audiologist and the receipt of a hearing aid was:

<u>Time Lapse in Months</u>	<u>Number of Children</u>
0-3	12
4-6	5
7-11	6
12-17	2
18-23	3
24-29	2
30-35	0
36-47	1

The data indicate that audiologists in medical centers arrange for hearing aids soon after the children are first seen. However, the data on age of receipt of hearing aid, when considered in the light of the number of "rubella babies" studied by the Project, is a cause of concern.

APPENDIX C-2

AUDITORY FUNCTIONING OF HORACE MANN SCHOOL FOR THE DEAF CHILDREN, 1968-69

<u>Dept.</u>	<u>No. of Children</u>	<u>Mild</u>	<u>Moderate</u>	<u>Moderately Severe</u>	<u>Severe</u>	<u>Profound</u>
Nursery	32	0	1	9	8	14
Lower School	30	0	0	2	11	17
Middle School	25	0	1	3	5	16
Upper School	16	0	0	3	4	9
Language Problems	24	1	3	3	7	10
TOTALS	127	1	5	20	35	66

<u>Dept.</u>	<u>No. of Children</u>	<u>No Discrimination</u>	<u>Few Words</u>	<u>Some Words</u>	<u>Measurable Discrimination</u>
Nursery	32	22	7	3	0
Lower School	30	17	7	6	0
Middle School	25	11	4	1	9
Upper School	16	7	3	1	5
Language Problems	22	12	3	5	2
TOTALS	125	69	24	16	16

APPENDIX C-3

SUMMARY OF CERTAIN BEHAVIORAL CHARACTERISTICS OF CHILDREN EVALUATED,
1968-70

		<u>Horace Mann Children</u>		<u>Children from Other Schools</u>	
		<u>68-69</u>	<u>69-70</u>	<u>68-69</u>	<u>69-70</u>
Number of Evaluations Included in this Data		32	9	25	36
PHYSICAL FACTORS:					
Gross Motor Coordination:	Satisfactory	22		14	21
	Poor	7		8	12
	Not Tested	3		3	3
Fine Motor Coordination:	Satisfactory	24		14	
	Poor	5		9	
	Not Tested	3		2	
Visual Sensitivity:	Satisfactory:	25		16	23
	Poor	5		3	10
	Not Tested	3		6	3
Visual Perception:	Satisfactory	20	3	11	21
	Poor	8	6	9	12
	Not Tested	4		5	3
Visual Memory:	Satisfactory	17	2	8	11
	Poor	7	6	13	15
	Not Tested	8		4	10
Number with Multiple Handicaps:		11	6	10	7

AUDITORY FUNCTIONING	<u>Horace Mann Children</u>		<u>Children from Other Schools</u>	
	<u>68-69</u>	<u>69-70</u>	<u>68-69</u>	<u>69-70</u>
Hearing Loss:				
None				2
Mild		1	1	1
Moderate	1		5	3
Moderately Severe	1	2	6	6
Severe	5	1	4	8
Profound	11	5	10	16
Ability to Understand Speech Using Audition Only (with amplification if recommended)				
Measurable Discrimination		2	8	7
Some words and phrases		1	2	9
A few speech elements and words		1	1	1
No ability		5	14	18

		<u>Horace Mann Children</u>		<u>Children from Other Schools</u>	
VOICE, SPEECH AND LANGUAGE:		<u>68-69</u>	<u>69-70</u>	<u>68-69</u>	<u>69-70</u>
Inner Language:	Satisfactory	28		20	
	Poor	2		2	
	Not Tested	2		3	
Receptive Language:					
Gestures:	Satisfactory	30	8	21	28
	Limited		1	2	3
	Not Tested	2		2	5
Understands Words:	Satisfactory	6	4	10	18
	Limited	3	4	6	8
	No Ability	21		6	6
	Not Tested	2	1	3	4
Understands Phrases:	Satisfactory	4	2	11	13
	Limited		5	3	7
	No Ability	26	2	8	12
	Not Tested	2		3	4
Understands Sentences:	Satisfactory	1	1	9	7
	Limited	1	2		10
	No Ability	28	6	16	14
	Not Tested	2			4
Comprehension through controlled lipreading and auditory clues:					
	Satisfactory	6		9	
	Limited	5		6	
	No Ability	19		6	
	Not Tested	2		4	

		<u>Horace Mann Children</u>		<u>Children from Other Schools</u>	
		<u>68-69</u>	<u>69-70</u>	<u>68-69</u>	<u>69-70</u>
Lipreading Ability:	Satisfactory	5	1	11	24
	Limited	8	7	5	6
	No Ability	17	1	6	3
	Not Tested	1		3	3
Expressive Language:					
Gestures:	Satisfactory	29	8	24	28
	Limited				3
	No Ability			1	1
	Not Tested	3	4		4
Vocalizes or Babbles:	Yes	21	9	20	31
	No	11		5	5
Uses Words:	Yes	7	6	16	30
	No	25	3	9	6
Uses Phrases:	Yes	4	1	10	22
	No	28	8	15	14
Uses Sentences:	Yes	2	1	8	17
	No	30	8	7	19
Imitates Speech of Adults:	Yes	16	9	18	24
	No	16		7	12
PSYCHO-SOCIAL FACTORS:					
Attention Span:	Satisfactory	14		9	23
	Poor	18		16	13
Emotional Status:	Satisfactory	16		9	9
	Poor	16		16	27

		<u>Horace Mann Children</u>		<u>Children from Other Schools</u>	
		<u>68-69</u>	<u>69-70</u>	<u>68-69</u>	<u>69-70</u>
Relation to Peers:	Satisfactory	20		9	19
	Poor	12		14	14
Adults:	Satisfactory	17		10	18
	Poor	15		15	18

APPENDIX D

Questionnaire developed for evaluation of the project by Horace Mann

Horace Mann Title III Project

HORACE MANN SCHOOL TEACHER'S QUESTIONNAIRE ON EVALUATION UNIT

Please complete the following, seal in enclosed envelope and give to Mrs. Clair Parker for transmittal to Mr. Golner of the Educational Planning Center. Please have Mrs. Parker check off your name when you turn in the questionnaire.

I. I have had the following contact with the Evaluation Unit (check all that apply):

- a. I referred a pupil to the unit _____
- b. I had brief consultations with staff members of the unit _____
- c. I participated in a staffing session about a pupil _____
- d. I received a copy of the written report on a pupil _____
I read the report and found it to be _____
helpful _____
not helpful _____
- e. A child was placed in my classroom upon the recommendation of the Evaluation Unit _____
- f. I had no contact with the unit _____
(If this question is checked please explain the reason for no contact.) _____

II. (If you checked I. f., you can omit this question.)

A. Please comment on the appropriateness and utility of the recommendations for you as the teacher and for the child.

B. Was the time spent in conference with the Evaluation Unit staff worthwhile? If not, why not? If yes, how?

C. What are your attitudes toward the personnel of the Evaluation Unit in terms of inter-personal and inter-professional relationships?

D. After a staff conference, do you feel you understand the child's problem better, or do you wait for the written report?

III.

A. What do you perceive as your role in the evaluation process?

B. In what ways would you like to become more involved in the evaluation of a pupil you refer?

C. What areas of the child's functioning do you feel the staff of the Evaluation Unit should explore?

D. What kinds of services would you like to receive from the Evaluation Unit that have not been available to you?

AGENCY QUESTIONNAIRE ON EFFECTIVENESS OF HORACE MANN EVALUATION UNIT

Please complete the following and return in enclosed envelope to Mr. John Golner, associate director to Title III projects. The purpose of this questionnaire is to assist us in evaluating the effectiveness of our services.

- I. I have had the following contact with the Evaluation Unit
(Check all that apply):

- a. I referred a pupil to the unit _____
- b. I had brief consultations with staff members
of the unit _____
- c. I participated in staffing session about a
pupil _____
- d. I received a copy of the written report on
a pupil _____
I read the report and found it to be
helpful _____
not helpful _____

- II. If you are a teacher, please answer the following:

- a. A child was placed in my classroom upon the
recommendation of the Evaluation Unit _____
- b. I referred a child in my class for special
assistance _____
- c. The placement was 1. appropriate _____
2. inappropriate _____
3. inappropriate, but the best
available placement _____

If #3 is the answer, please explain why:

- III. For Agencies and Teachers:

- a. Please comment on the utility of recommendations made for the children referred.
- b. Please comment on the usefulness of the Horace Mann Evaluation Unit as an organization in respect to the value of its services to you.
- c. Please comment on how present services to you could be improved or expanded in the future.
- d. What are your attitudes toward the personnel of the Horace Mann Evaluation Unit in terms of interpersonal and interprofessional relationships?

PARENTS' QUESTIONNAIRE
HORACE MANN EVALUATION UNIT
(A TITLE III, ESEA PROJECT)

Please check the appropriate answer or write in the space provided. Omit any questions which do not apply to you or your child.

- I. a) I was referred to the Evaluation Unit by a hospital, teacher, school or other agency _____
- b) I contacted the Evaluation Unit myself _____

If you answered b), who told you about the Unit?

II. Your Impression of the Evaluation Unit:

- a) When you arrived for your first appointment, were you
pleased _____ satisfied _____ not satisfied _____
- b) After the first evaluation session, were you
pleased _____ satisfied _____ not satisfied _____
- c) At the end of the series of evaluation sessions, were you
pleased _____ satisfied _____ not satisfied _____
- d) Did you feel comfortable talking to the staff? Yes _____ No _____
- e) Did you feel free to ask questions which concerned you?
Yes _____ No _____

If you were not satisfied, explain why, and suggest what should have been done:

- III. a) How did your child feel when you came to the Evaluation Unit for the first time? happy _____
frightened _____
not interested _____
- b) When you returned for the second visit, was your child happy _____
frightened _____
not interested _____

- IV. a) Were the results of the evaluation explained to you? Yes _____ No _____
- b) Did you understand the recommendations or suggestions? Yes _____ No _____
- c) Were you able to follow the recommendations or suggestions? Yes _____ No _____
- d) Do you think the time spent in the Evaluation Unit was worthwhile? Yes _____ No _____

e) Did you feel the total evaluation was: too long _____
 too short _____
 satisfactory _____
 length _____

f) What did you get from the Evaluation Unit that was different from other clinics or agencies to which you took your child?

V. If there was a delay between the time you first contacted the unit and the time of your first appointment, was your child's problem different by the time of the first appointment?

Yes _____ No _____

If yes, how was it different?

VI. Did you contact any other agencies for help while waiting for your appointment?

Yes _____ No _____

If yes, which agencies?

VII. a) Did you have any difficulty obtaining the medical services recommended by the Evaluation Unit, such as vision or other examinations, medical prescriptions, etc?

Yes _____ No _____

If yes, please explain:

b) Was it possible for you to obtain the recommended school placement for your child?

Yes _____ No _____

If no, please give reasons:

c) Were you able to obtain the recommended counseling services from other agencies?

Yes _____ No _____

d) What services do you wish you had received from the Evaluation Unit that you did not receive?

e) Please list any suggestions you have for improvement of the Evaluation Unit services to children and parents: