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Survey of language instruction method used with partially hearing children in the United States Canada and Great Britain

Percy Lee Baxter
The University of Montana

A SURVEY OF LANGUAGE INSTRUCTION METHODS USED WITH PARTIALLY HEARING CHILDREN IN THE UNITED STATES, CANADA AND GREAT BRITAIN

By

Percy L. Baxter

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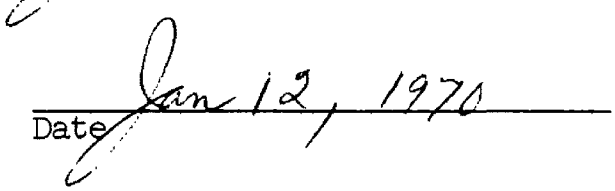

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CHAPTER I

INTRODUCTION

Purpose of the Study

In the spring of 1965 the author was asked to work with his fellow teachers to develop a curriculum for use with the hearing handicapped pupils in the public schools of Calgary, Alberta. It seemed logical that the first step in attempting such a task should be the obtaining of a broad background of information about the work presently being done with such children but an examination of the published literature revealed little prospect for getting a general overview of current philosophy and instructional procedures unless a lengthy and thorough study were undertaken. It appeared that there was a need for a compilation or summary of practices which might make a useful quick reference for educators and administrators who seek an overview of current practices in meeting the educational needs of hearing impaired children. This need for background information and a hope that a useful summary of practices might result motivated this study.

Since the field of hearing impairment is very broad and the author is primarily interested in the instruction of pupils with trainable residual hearing and not the profoundly deaf, it was decided to limit the study to

partially hearing children. It was rationalized that the key to all education is facility in the use of language so language development received the greatest emphasis. However, it was recognized that language does not develop separately from other educational fields, especially reading, auditory training, and speech.

Further, it was reasoned that administration and supervision of programs, financial support, length of training period and age at which it is begun definitely affect the language programs for partially hearing children. Therefore, these were to be examined also. In the end it was hoped that considerable insight might be achieved with respect to those instructional methods which are most likely to produce the greatest academic success and social growth for hearing handicapped pupils.

The successes and failures of the instruction of the hearing handicapped have been a personal and professional concern of the author for more than a decade. Professionally he has been actively engaged in teaching partially hearing children in the Calgary Alberta Public Schools and, to a lesser degree, acting as an assistant administrator. In spite of the obvious weaknesses in the present education of the hearing handicapped his outlook has continued to be one of optimism that deficiencies in this educational

area can be either overcome or adequately compensated for if we continue to recognize the weaknesses and seek solutions to the problems involved in overcoming them.

In the course of the author's work he has been faced continually with the problem of providing instruction for children who come to school at the age of six with little or no verbal language. Thus his interests and the development of programs in which he is involved have tended to become language centered. The question consistently is "How can we build sufficient language skills into these hearing impaired children for them to cope with their school subjects?" Considerable success is achieved in getting them to repeat words and phrases orally, some learn to copy written work beautifully, and some learn to read orally so fluently that hearing persons can understand what they read; but much of the time they, themselves, do not comprehend what they are saying, what they are writing, or what they are reading.

Perplexed by this problem, the author, his professional colleagues, and some other parents began searching for ways to aid their hearing handicapped children to develop a meaningful verbal language. Earlier instruction offers promise[1] so educators and parents in Calgary worked together

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[1]Adam J. Sortini, Importance of individual hearing aids and early therapy for preschool children. JSHD, 24, 1959, 346-353.

to institute a five half-day week preschool education program for their hearing handicapped children. Gains are being made in the development of skills but still the basic problem persists. Locally these people are experiencing among their younger children the shortcomings or failures that have been indicated in reports on the academic achievement of the hearing impaired population in general.

An increasing awareness of the expanding knowledge in his field and a concern about the deficiencies in the language training afforded the hearing handicapped children by the local classes led the author into a program of graduate study with the Department of Speech Pathology and Audiology of the University of Montana in the summer of 1963. Since that time he has been pursuing a study program which has stressed the hearing assessment and educational needs of the hearing impaired.

His conviction that language development precedes all other academic growth continued to grow. Thus it was the study which is reported herein evolved from a growing desire to more fully share in the overall knowledge which has been accumulated in the field of language instruction for the hearing impaired coupled with a desire to see if further insight might be gained into the reasons for the limited success of present language instruction procedures used with this group.

Therefore the undertaking of the study had a broader base than just curriculum development.

General Overview

There have been two broad general reactions to the growing understanding of the nature and significance of hearing losses. One has been a spirit of optimism often coupled with a sense of urgency. This was the tenor of Dr. Hardy's address to the International Conference on Oral Education of the Deaf in 1967 as he discussed deafness and other handicaps resulting from the rubella epidemic of 1963 and 1964.[2] The other has been a feeling of pessimism and a sense of failure.[3]

Optimism is reflected in the words of one teacher of preschool deaf children who said, "I believe deaf children are capable of learning anything their hearing peers learn."[4] Miller[5] expressed similar sentiments when he declared that hearing impaired children can catch up academically with hearing children of their own age. Much of this optimism

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[2] Proceedings of the International Conference on Oral Education Deaf, Washington: The Volta Bureau, 1967, 1-9.

[3] Herbert R. Kohl, Language and Education of the Deaf, New York: Center for Urban Education (not dated, probably 1966.)

[4] Leahea Grammatica, Building a language foundation at the preschool level. Volta Review, 66, 1964, 378-381.

[5] Reid C. Miller, Adequate programming on a junior and senior high school level. Volta Review, 66, 1964, 439-445.

is founded on the fact that we have many new tools which promise to aid in the solution of the basic problems, or what we interpret as the basic problems, of the hearing handicapped. Programmed instruction,[6] i/t/a,[7] and talking dictionaries[8] are three examples of such tools.

The increasing refinement of testing techniques is making possible even earlier diagnosis and analysis of hearing deficiencies. Reed[9] of London, England, has claimed recently that there is no reason why almost every baby who has a hearing loss should not be identified by the age of one year. If this is indeed the case, we are moving closer to being able to provide appropriate training for hearing handicapped children at an age when the development of language normally begins with hearing children and when children are most ready to begin learning this basic and vital skill.

This optimism is further supported by developments in the electronics field. The refinements in instruments

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[6]Mary Lou Rush, Programmed instruction for "The Language of Directions". Amer. Annals Deaf, 109, 1964, 356-363.

[7]John K. Duffy, i/t/a and the hearing impaired child. Volta Review, 68, 1966, 150-153.

[8]N.W. Crane and B.B. Evans, the talking dictionary. Volta Review, 64, 1961, 125-127.

[9]Proceedings of International Conference on Oral Education of the Deaf, 56.

have greatly improved the quality and the strength of the amplification which can be fed into defective auditory mechanisms and our increased understanding of the tolerance of the human ear to sound pressures has made it possible for us to use safely more nearly maximum amplification levels. The work done by the Ewings[10] in England and Huizing[11] in Holland indicates that we may be only beginning to make the most effective use of residual hearing.

The increased freedom with which knowledge is being shared is indicated by the extensive published coverage given such international conferences in deaf education as the international Conference on Oral Education of the Deaf held at Northampton and New York in 1967 and the International Congress held at the University of Manchester in 1958. This sharing is facilitiating the growth of our understanding and the increased speed with which it is being disseminated also helps.* We have come a long way

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*The proceedings of the 1967 conference (I.C.O.E.D.) were published almost immediately by dispensing with carefully prepared manuscripts and normal editing. The typewritten papers which had been prepared for oral presentation to the conference were printed as handed to the publishers.

[10]Sir Alexander W. G. Ewing and Lady Ethel C. Ewing, Teaching Deaf Children to Talk, Manchester: The University Press, 1964.

[11]Sir Alexander W. G. Ewing, Ed. The Modern Educational Treatment of Deafness, Washington: The Volta Bureau, 1960.

with regard to sharing information since Thomas Hopkins Gallaudet went to England in 1815 and was turned away by the Watson and Braidwood families who had a monopoly on oral methods and were unwilling to share them.[12] There may not be a universal willingness to share as yet but this is certainly another area in which there is good reason for optimism and hope.

This feeling of optimism is often expressed by members of the general public who have some association with hearing handicapped children. From them a comment to the effect "Isn't it wonderful what they are doing for deaf kids these days!" is frequently heard.

Yes, it is wonderful what is being done for "deaf kids" but there is another reaction to our increased understanding of the complex problems facing the hearing handicapped. There is a growing sense of urgency for meeting their needs which sometimes verges on panic or even despair. There is a feeling that in spite of all we know we are in fact failing these people. Furth[13] believes that we often start too late to educate the deaf. Kohl[14] found in his

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[12]Ruth E. Bender, The Conquest of Deafness, Cleveland: The Press of Western Reserve University, 1960, 124-125.

[13]Hans G. Furth, Thinking Without Language. The Psychological Implications of Deafness, Toronto: Collier-MacMillan Canada, Ltd., 1966, 205.

[14]Herbert R. Kohl, Language and Education of the Deaf, New York: Center for Urban Education, 1966.

study that a large percent of the deaf are inadequately prepared for life with language as their greatest deficiency. Indeed, there are plenty of areas of weakness and failure in our present handling of the problems of the hearing impaired. If there were not there would be little need for concern or for optimism that we can make improvements.

The studies of the abilities and personalities of the deaf and hard of hearing as reported by Myklebust (1964) certainly point out many areas for concern. The hearing handicapped do have more than their fair share of personal problems and their educational achievements have not compared favorably with those of the hearing in many respects.[15] To the degree that these things are true, deaf education can be interpreted as having failed.

In a more recent survey of the educational and economic status of the hearing handicapped in the United States, Kohl[16] has again shown the limitations in achievement found among the members of the deaf communities especially in the language communication area. In fact, Kohl, when speaking about the language of the deaf, asks the question, "At what point do the deaf fail conceptually, and how does this relate (if at all) to their emotional and social

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[15]Helmer R. Myklebust, The Psychology of Deafness, Second Edition, New York: Grune and Stratton, 1964.

[16]Herbert R. Kohl, Language and Education of the Deaf. New York: Center for Urban Education, 1966.

problems?" Thus a language involvement beyond actual day to day communication is inferred. It poses a question for which there are as yet no definite answers. His findings also indicate that the hearing handicapped are generally relegated to a low or entirely unsatisfactory economic status.

A survey made by the Western Institute for the Deaf, Vancouver, B.C. in 1963, showed a strikingly similar state of affairs existing among the members of the hearing handicapped community of that section of Western Canada. This study revealed a definite need for assistance with personal problems, improved education, a need which is much more acute with the hearing handicapped than it is among members of the general population of the area.

The growing sense of urgency was summed up well by Wooden and Willard, staff members of Project LIFE, in a paper delivered to an institute on programmed learning held at the University of Nebraska in 1965.[17] They said of the deaf child's acquiring language:

> His instruction in language is a race against time. Therefore the question is not whether he can acquire a given language skill, it is whether he can acquire enough language skills in time to obtain an education.

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[17]Letter and mimeographed materials sent to the author by Mr. Wooden, October, 1965.

Study Design

The study was conducted in two parts: a reading survey of published literature, and a mailed questionnaire to survey the current practices used by a wide variety of school systems.

The former was a review of literature dealing with language instruction for hearing impaired children, especially those with residual hearing. Literature for the period 1958 to 1968 from Canada, the United States and Great Britain was surveyed. The decision to keep the survey current was made in full recognition of the value of earlier writings. As Myklebust[18] so ably said, "----only by comparing our present state of knowledge with that of the past can we achieve the perspective needed for a creative effort in the future." Luckily, this tends to be an accepted principle among writers so it is common to find authors referring to earlier reports on the subject they are discussing. In this way the reader can be kept in touch with the past without actually consulting the original works.

The second part of the survey was conducted by means of questionnaires which were mailed to educators in each of the three countries. The nature of the information

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[18]Helmer R. Myklebust, The Psychology of Deafness, Second Edition, New York: Grune and Stratton, 1964, 106.

sought by the questionnaires was influenced by the need for a full examination of these practices. Therefore, many questions were designed to obtain information which would help to indicate the total setting in which the language instruction is being given.

The value of a broad questionnaire sampling of current practices was indicated by the rapid increase of the number of programs for the deaf and partially hearing during the past decade and the trend toward providing more day classes rather than increasing the number of residential programs. In the United States alone the total number of programs reported by The American Annals of the Deaf increased from 380 on October 31, 1958[19] to 628 on October 31, 1966[20].

The same reports indicate that the number of residential programs decreased slightly (from 88 to 80) during this period while the number of day programs nearly doubled (from 277 to 520). Is it not likely that such a marked trendto day programs would be accompanied by other changes in educational patterns? Would there not be a tendency for new techniques to develop with so many new programs

[19] The American Annals of the Deaf, January, 1959, 155.

[20] The Directory of Services for the Deaf in the United States, The American Annals of the Deaf, May, 1967, 484.

being started? It appeared obvious that a questionnaire would be a practical way to obtain answers to these questions since the search of the literature produced no other source from which such information could be obtained.

Definition of Terms

The terms used to refer to the various degrees of hearing impairment, including the complete lack of hearing, have tended to be meaningful only to those who use them. Many authorities including Pintner[21] and Myklebust[22] have grappled with this problem but, to date, there has been no clear agreement on the use of terminology. This being the case, the author has adopted terms which are in keeping with the redefinition of terms laid down in 1962 by the Department of Education and Science in Great Britain, and as reported by Reed,[23] partly because, in Reed's[24] words, "partially hearing reflects a more positive approach to the use of residual hearing" than such terms as partially

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[21] Rudolf Pintner, Jon Eisenson, and Mildred Stanton, Psychology of the Physically Handicapped, New York: F. S. Crafts & Co. 1945, 101-102.

[22] Helmer R. Myklebust, The Psychology of Deafness, Second Edition, New York: Grune and Stratton, 1964, 3-6.

[23] Proceedings of the International Conference on Oral Education of the Deaf, Washington: The Volta Bureau, 1967, 53-54.

[24] Proceedings of the International Conference on Oral Education of the Deaf, Washington: The Volta Bureau, 1967, 54.

deaf or hard of hearing, and partly because partially hearing appeals to the author as a more definitive term, at least from an educational point of view.

As used in reporting this study, partially hearing implies a condition of having a hearing defect which is educationally significant but which is not so severe that special training, with or without the use of amplification, cannot lead to the development of normal, or near normal, speech and language patterns. Deaf, in effect, implies having no hearing which can be useful in speech and language development even when maximum amplification is used.

Hearing handicapped is another term which is subject to various interpretations. As used here, hearing handicapped includes both the conditions partially hearing and deaf as previously defined. In other words, hearing handicapped simply infers having a hearing impairment which implies a need for special education and/or social help. Hearing handicapped is not covered by Reed in the previous reference, but the definition used here is the one in accepted use in the Calgary area.

Briefly then, a deaf person is one who has no hearing which can be useful for the acquiring and comprehending of speech and language while a partially hearing person is one who has a moderate to severe loss of hearing but who does have hearing which can be educationally useful.

Hearing handicapped is a term covering both deaf and partially hearing.

The author recognizes that the foregoing definitions are by no means universally accepted. They are offered in the hope that they will help to lead the reader meaningfully through the reporting and discussion contained herein. Further, by their use, it is hoped that the reader will be made sensitive to the need for the adoption of more descriptive terminology for use in discussing hearing deficiencies, especially in the light of newer developments in the training of the residual hearing of hearing handicapped persons.*

Many of our educational terms tend to have local connotations because of the regional nature of our educational systems. However, it is hoped that, either through definitions provided by the author or context, the reader will be led to the end with a minimum of frustration and confusion.

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* This problem with the use of terms can be illustrated by the fact that hard of hearing crept into the questionnaires in some places where the author meant to use partially hearing. To be as consistent as this inconsistency will allow, the author has used hard of hearing in reporting the results from these sections of the questionnaires. It might be further noted that hard of hearing is frequently used by other writers to indicate the condition usually referred to as partially hearing in this study.

CHAPTER II

PROCEDURE

This study was conducted in two parts as was explained in Chapter I. In the one, a methodical survey of the literature of the period 1958 to 1968 was made to learn what has been reported and published during this time regarding developments in philosophy and practice in the field of language instruction for partially hearing children in Canada, the United States and Great Britain. In the other, a mailed questionnaire survey was made of school systems in these countries to gain first hand information about current practices in widely dispersed local settings. These two methods for gaining the desired information were used concurrently although they were largely independent of one another.

SURVEY OF THE LITERATURE

Professional Journals

The first step in the literature survey was to review the professional journals which are most concerned with the education of the deaf and partially hearing. This was facilitated by referring to the annual indexes which these journals typically publish. By this means articles which

were likely to be pertinent to the study were readily selected and easily found.

Beginning with 1958 issues and working through to 1968 the following publications were reviewed for all pertinent articles: The American Annals of the Deaf, ASHA, The Journal of Speech and Hearing Disorders, The Journal of Speech and Hearing Research and Volta Review. DSH Abstracts was also reviewed for the general overview it gives and to lead the author to other articles of interest.

Books and Monographs

The bibliographies which accompanied the journal articles provided references to books and published monographs, as well as other journal articles which could be reviewed. Other sources which provided the titles, publishers and dates of publication of suitable volumes were the lists of materials available from the Volta Bureau and from the Rocky Mountain Special Education Instructional Materials Center (RMSEIMS).

The reviews of publications published annually in the Directory of Services for the Deaf in the United States, American Annals of the Deaf, and library card catalogues lead the author to other volumes which also contained desired information.

Some of the books and monographs which were reviewed were obtained from the University of Montana Library, the Calgary Public Library, and The Society for Hearing Handicapped Children in Calgary. Others were purchased by the author for study and inclusion in his own private library. Ten volumes were ordered from RMSEIMC in July, 1968, to complete this review.

Theses and Dissertations

Annually, The American Annals of the Deaf publishes a list of doctoral dissertations and masters theses which report studies made in the general area of hearing problems. From these lists the author made a selection of 21 masters theses dating back to 1958. These were requested through the Inter-Library Loan Service of the University of Montana Library. Ph.D. dissertations in this area were found to be relatively rare and were not readily available through Inter-Library Loans.

Miscellaneous

The questionnaire survey yielded mimeographed and printed materials which were also used in this survey of the education of the hearing handicapped.

QUESTIONNAIRE SURVEY

Development of Questionnaires

Two questionnaires were prepared, one (labelled A) for obtaining information from state and provincial departments of education and the other (labelled B) for getting information from schools. Copies of both questionnaires and their covering letters are included in the appendices. In keeping with the idea that more must be known than the actual instruction in language, these questionnaires were made up of multiplechoice and short answer questions which sought to elicit information about a variety of educational factors from financing to instructional techniques. Care was taken to keep each questionnaire as simple as possible. However, the need for clarity in stating the questions and the desire to provide choices from which respondents might select appropriate answers, plus the author's desire to obtain information about the many factors which affect language instruction, made the questionnaire reasonably lengthy and somewhat time consuming to complete.

A covering letter was prepared and attached to Questionnaire A. This letter explained briefly the purpose of the questionnaire and asked the recipient to assist with the project. Definitions of partially hearing and

deaf or profoundly deaf were also given. Finally, in this letter recipients were invited to send additional information about their programs.

Questionnaire A for Departments of Education

Questionnaire A was designed to gain information about state or provincial administration and support of educational programs for the partially hearing and deaf. Also, it sought the names and addresses of schools from which information about local programs might be obtained.

In order to determine the status of the education of the hard of hearing in each state or province, questions about compulsory attendance ages and school boards' legal responsibilities were asked. Also, the extent of public financial support and what ages are covered was also questioned.

Another section sought to determine the extent to which these programs are state or province controlled and administered and what other organizations share in the administration and control.

A large portion of the questionnaire was devoted to gaining specific information about the hearing handicapped being educated in the province or state. They were broken down into age groups, 2 to 5 years, 10 to 13 years, 14 to 16 years and 17 to 20 years. Each age group was further

broken down into profoundly deaf and partially hearing. The following information about each group of pupils was solicited: (a) Those being integrated with hearing children (b) Those being instructed orally, manually, or by a combined method (c) Those using amplification most of the time, part of the time, or rarely (d) Those showing competency in oral communication, reading comprehension, or writing competency (e) Those who began their formal education before age 5 years of after 6 years (f) Those having other physical handicaps. Respondents were asked to indicate whether 0-25%, 26-50%, 51-75% or 76-100% of their puplis of each age group fell into each category listed.

The final section of this questionnaire asked that the names of two or three leading schools of the state or province be provided on the understanding that the listing of the names implied approval of these schools being contacted directly. Respondents were asked to give the name of each school, its address, and the head administrator's name and title.

In so far as feasible, short answer questions and check lists were used for obtaining information. This made the questionnaire lengthy but it largely eliminated a need for lengthy written answers.

Questionnaire B for Schools

The second questionnaire, Questionnaire B for Schools, was made longer and more detailed. Again check lists and short answer questions made up most of the items. Because so many choices were given to facilitate answering and to suggest several of the possibilities for answers, this questionnaire required 16 pages, six of which were duplicates of pages 2 and 8. The duplications were made necessary because reports were sought on four age groups.

Questionnaire B asked for information about numbers of teachers in the school, the number of partially hearing children in age groups under 6 years, 6 to 8 years, 9 to 11 years and 12 years and over, admittance and leaving ages and preschool training. It continued with preschool training by asking about time spent by puplis in preschool and how preschool programs are operated.

The next section sought information about three age groups, 2 to 8 years, 9 to 13 years, 14 years and over and a separate check sheet was provided for each group. Replies to items were in percentages which could be checked off in the appropriate column; none, 1-25%, 26-50%, 51-75%, and 76-100%. It was requested that percentage of children with hearing losses of less than 50 dB, between 50 and 65 dB, between 65 and 80 dB, and greater than 80 dB be

indicated. Regarding those with less than 80 dB loss, the percentage using amplification most of the time was asked as well as those who use amplification infrequently.

The next items dealt with instructional procedures, oral, manual or combined, in conjunction with reading and writing. Again percentages were asked for. These were followed by items on instructional setting: in special classes for hearing handicapped, part time in special classes and part time in regular classes, or fully integrated with hearing children. The final two items dealt with physical handicaps other than hearing losses. A section on hearing aids contained several items dealing with circumstances under which a child gets optimum value from his hearing aid, the type of amplification most satisfactory for classroom instruction, and the class setting in which partially hearing children show most satisfactory academic growth.

Information was sought about the setting which provides the best personality growth and the criteria used in selecting pupils for the program. For the section on hearing aids and best class setting the respondents were encouraged to give opinions. In the introductory statement it was recognized that the answers would be based upon subjective judgements.

The percent of total instruction time spent on language development and related activities such as auditory training and speech therapy was requested also, as well as time spent on such subjects as science, geography, arithmetic, history and physical education. A check list for audio-visual aids which are used regularly was provided.

A check list of instructional procedures which may be used was included. Respondents were asked to rate each according to frequency of use in their schools (never used, used infrequently, used frequently, used regularly) and how they should be evaluated as worthwhile instructional procedures (poor, fair, average, good).

Questions about special educational provisions for the multiply-handicapped, tests used to determine the mental ability of pupils in the school, and whether or not the school had a curriculum especially designed for the partially hearing children, completed this questionnaire.

A brief covering letter was attached. Basically this explained how the school was selected and suggested that the recipient refer to the covering letter of questionnaire A which was also included in the mailing to schools. The letter on questionnaire A, explained the purpose of both questionnaires.

Procedure Used for Drafting the Questionnaires

First drafts were prepared by the author after consultation with the principal of James Short School in Calgary and the teaching staff of its hearing handicapped department. Copies of these first drafts were distributed to the members of this group of teachers for study, and later a meeting was held to discuss any revisions which were considered necessary. Many suggestions for improvement were forthcoming so a second draft was prepared incorporating the suggested changes. It, too, was brought back to the group for study and comment. Following this a third draft was prepared and duplicated for general distribution.

Distribution of Questionnaires

The distribution of questionnaires was made in two phases. First, during October, 1967, 56 mailings were made to the state departments of education or public instruction in the United States. This included one to the District of Columbia and five to United States territories. Also, ten mailings were made to provincial departments of education in Canada and one was sent to

Great Britain. This made a total of 67 mailings in this first phase.

The names and addresses of United States departments were obtained from The Education Directory, 1966-67, Part I, State Governments, Office of Education, U.S. Department of Health, Education and Welfare. The person in the department whom the author thought was most likely to be responsible for the instruction of the hearing handicapped was selected and the mailing was made directly to him. His name was included in the inside address and the salutation of the covering letter.

The selection of names and the mailings were made in a similar way for Canada using the Canadian Almanac and Directory, Copp-Clarke, Toronto, 1967.

To maintain consistency in procedure, only one mailing was made to Great Britain. The thinking behind this was that Great Britain, having a unitary system of government, would have its senior educational authority vested in its central government whereas, in the federal systems of the United States and Canada, education is the responsibility of the individual states and provinces. It was further reasoned that if a different distribution of questionnaires were more appropriate for Great Britain, the reply to the first mailing would indicate this and a different procedure

could be adopted.

This British mailing was addressed to Sir Herbert Andrew, K.C.M.G., C.B., Permanent Under-Secretary of State, Department of Education and Science, Curzon Street, London, W1, England.

The second phase was the mailing of questionnaires to local school authorities. This began in November, 1967, and by the end of February, 1968, mailings had been made to 82 schools.

Included on the questionnaires for departments was a request for the names and addresses of local school personnel who might be willing to provide information about their programs. This request indicated that the provision of names inferred official approval to contact the local authorities directly. For this reason and to maintain consistency in procedure, mailings were made only to those schools whose names were supplied by respondents to Questionnaire A. Thus the phase two mailings were fully dependent upon the returns from those made in phase one.

Department and school personnel were mailed copies of both questionnaires and both covering letters. It was considered important that all recipients have both questionnaires and letters so they would be as fully informed as possible about the nature of the project in which they were

asked to participate.

A stamped, self-addressed envelope was included with each mailing. The amounts of return postage had been carefully checked with both the United States and Canadian Post Offices.

Late in May, 1968, follow up letters were mailed to the 69 departments and schools from which no replies had been received. Copies of these letters appear in Appendix B.

CHAPTER III

RESULTS

I SURVEY OF LITERATURE

A literature survey such as was described in Chapter II can be very fruitful in terms of information gained and points of view which can be considered but it does not lend itself readily to a concise series of statements which might be termed "results". The author therefore decided to leave most comments about this review for Chapter IV, the discussion chapter, where they could be interwoven with comments about the points revealed in the questionnaire survey or might be used to elaborate on various aspects of language training for partially hearing children.

Following are some brief outlines of some of the major trends and issues which have received attention in the literature of the past decade.

1. There is an increasing emphasis on the training of residual hearing with some schools considering any measurable auditory sensitivity as useful and worth training. In some school systems fewer than one percent of the hearing handicapped are rated as totally deaf.

2. There is a trend toward more and more integration of hearing handicapped children with hearing children. This accompanies a growing belief that both the deaf and

the partially hearing need to spend at least part of their school time in a normal educational environment. Also associated with this is an increasing conviction that it is best to keep hearing handicapped children in their normal home and community environments.

3. While some educators are busy pointing out the weaknesses in present and past educational practices used with the deaf and partially hearing, others are stating with conviction, that there is no reason why the hearing handicapped should not reach academic equality with their hearing peers.

4. The old controversy over which is best, oral or manual methods, still rages on. With the advent of better hearing aids an increasing faith in oralism appears to have been developing. At the same time, much research is being done in an effort to demonstrate that a manual approach is desirable with many, if not all, hearing handicapped. Many educators appear to be holding to a middle position by using, and expounding the virtues of, a kind of middle-of-the-road approach. They use some system of combined manual and oral instructional procedures. These take many forms including the use of formal signs while speaking, finger spelling combined with speaking and specialized

techniques such as cued speech*.

5. Interest in the potential of programmed instruction is increasing and a number of programming techniques and teaching machines have been or are being tried. There appears to be no evidence that programming is not a sound approach but there are many difficulties to overcome if its full potential for assisting with language development with the hearing handicapped is reached. It would appear that special programming is needed to meet the special needs of the hearing handicapped, but these needs are not clearly known and when they are it will require a great deal of time and effort to develop the desired programs. An increasing variety of audiovisual aids are being developed and used to support programmed instruction as well as other teaching techniques.

6. There is currently much interest in an indirect or natural approach to teaching language to the deaf and partially hearing. Perhaps the awareness that many adult hearing handicapped have distinct language defects is leading educators to re-examine the use of the direct,

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*Cued speech is a formal system of signs formed with hand and fingers assuming various shapes in various positions in relation to the face to cue the "listener" regarding the presence of sounds which are not readily lip read.

analytical approach to language instruction. In many cases, the natural approach is advocated with a strong recommendation that language instruction be started in early infancy and full use be made of residual hearing. Frequently this natural method emphasizes the creation of situations where language is needed on the theory that a felt need will stimulate the child to develop language more effectively than formal, analytical procedures.

7. More concern is being expressed for the need for developing curricula which is geared to the needs of the hearing handicapped and which will guide teachers into using consistent instructional techniques to reach well defined goals. This, again, may arise from a recognition that we are falling short of adequately preparing the deaf and partially hearing for life in a modern society. This may also reflect an uneasiness about the possibility of innovations leading to so many variations of approach in the name of experiment and research that the pupils and students will not learn to function adequately and will become confused instead of learning acceptable, well structured forms of language and social behavior.

8. Coupled with the doubts inferred above, is a growing desire for more carefully planned, well controlled research studies to examine the effectiveness of various

educational procedures which are currently advocated. Although much has been attempted by way of research on educational practices used with the hearing handicapped the studies are often little more than definitions of what is currently being done or are just accumulations of biases. Whenever carefully controlled projects are carried out the results are frequently inconclusive and the researchers usually suggest that more research in the area is indicated.

9. The relative merits of residential schools and day programs is far from a settled issue. This question has become more involved and complex by the introduction of the new dimensions of integration versus segregation and the question of where the dividing line lies between those who can and those who cannot profit from auditory training. There is also a belief that natural language should be taught in as normal an environment as possible with the inference that a residential setting is not "normal".

II QUESTIONNAIRES

Returns

The initial mailings from October, 1967 to February, 1968 yielded 42 replies from education departments and 38

from schools. By July 31, 1968, the follow up letters had brought an additional 28 replies from schools and 13 from departments. Thus the total returns were 55 of a possible 67 or 82% from departments of education and 66 of a possible 90 or 73% from schools. A number of these replies were merely requests for new questionnaires or a statement to the effect that the questionnaires were not appropriate to the programs being offered. Still others were printed literature, a letter or the wrong questionnaire. (Three school returns were a completed questionnaire A.) As a result, the net yield of useful questionnaires was 48 or 53% for schools and 44 or 66% for the education departments. Other kinds of useful information was contained in some of the other replies but most of it could not be used in the tabulations.

The follow up letters brought 20 requests for new questionnaires. Most of the respondents claimed that the originals had not been received. In another case a respondent for a state department reported having mailed a completed questionnaire which had not been delivered to the author. There remains a question as to how many others were not delivered in spite of the fact that first class postage was used on mailings both ways.

Requests for new questionnaires resulted in 19 more sets

being sent out in June, 1968. Thirteen returns from these are included in the above report on yields.

A reply from the Department of Education and Science, London, England was received after the preparation of the manuscript was well underway. Useful printed information was supplied but the questionnaire was not returned.

Since the reply from Great Britain was very late in arriving and the questionnaire was not returned and no schools were recommended for further contact, the reports contained in this chapter include departments and schools from only the United States and Canada. Wherever it seems appropriate the results are reported separately for these two countries so their similarities and differences can be more readily observed.

A. Departments of Education

Of the questionnaires used in the following reports, 35 are from the United States and nine are from Canada.

It is convenient for this reporting that the major political subdivisions in the United States are states and in Canada are provinces. These terms, therefore, adequately indicate the country to which reference is being made. Since no United States territory reported having programs the only inaccuracy here is the inclusion of the

District of Columbia with the states.

Compulsory Attendance

Of the 34 United States and nine Canadian departments from which reports on compulsory attendance were received two provinces and four states were shown to have no compulsory education for hearing handicapped children. At what is perhaps the opposite extreme, three states have compulsory attendance from early childhood until marriage, satisfactory employment, graduation from high school or until age 31 whichever should apply in the case of a specific individual.

Table 1 shows the varying age ranges of compulsory attendance reported and the states and provinces in which each range applies.

Table 1 Compulsory School Attendance for Hearing Handicapped Children

Age Range (yrs.)	States	Provinces
None	Ariz. Ida. New M. S.C.	N.B. Alta.
Under 4 - 21	Conn. R.I.	N.S.
4 - 21	Minn. Wis.	
5 - 16	D.C. Kan. Alas.	
5 - 21	Me.	
6 - 14	Tex.	
6 - 15		B.C. P.E.I.
6 - 16	Mass. Ark. Colo. Del. Mo. N.Y. Wyo.	Ont.
6 - 17	Tenn.	
6 - 18	Am.Samoa, Hawaii, Nev.	N.B.
7 - 16	W.Va. Fla. Ky. Mon. N.Dak.	Man. Sask.
7 - 18	Ore.	
7 - 21	Vt.	
6 - No definite upper limit	Cal. O.	
4 - No definite upper limit	N.H.	
Totals	34	9

Board Responsibilities for Education of the Hearing Handicapped

In reply to the question "Is there legislation which compels local School Boards to provide educational facilities for the hearing handicapped?", five Canadian and two U.S. replies were simply no. Permissive legislation was reported in effect in three provinces and in eleven states. Twelve states were said to require local boards to provide education for the hearing handicapped. Of these, five could either provide instruction locally or make a contract with another school system to educate their hearing handicapped pupils. Another five state respondents did not give a direct reply to the question but indicated that their local authorities could send pupils to other schools.

Financial Assistance

Financial support was reported to be larger in twenty-three states and all nine provinces than the financial assistance given to regular educational programs for non-handicapped children. Estimates of how much larger this support is ranged from 125% to 400%. There was insufficient evidence given to make it possible to determine how such estimates were derived. In only seven of the states financial support was reported to be the same for both the hearing handicapped and the non-handicapped.

Table II shows the age ranges for which financial support is provided by the states and provinces as reported on 40 questionnaires. Again the numbers indicate how many state or provincial departments were reported as supporting each age group.

Table II Ages for Which Financial Assistance is Provided from State or Provincial Departments

Age Range (in years)	No. of States	No. of Provinces
3 or under - 21	14	3
3 or under - 20	2	0
3 or under and up	1	0
4 - 21	2	0
4 - 31	1	0
4 - 17	1	0
5 and up	1	1
5 - 21	3	0
5 - 18	0	2
6 - 21	6	2
6 - 18	0	1
Totals	31	9

Publicly Supported Assistance Beyond Compulsory School Age

Most of the states and provinces from which completed questionnaires were received are reported to have assistance for hearing handicapped persons beyond compulsory school age. Some form of vocational rehabilitation, usually involving training, counselling and job placement, was reported for 33 states and 4 provinces. Sheltered workshops were reported to be provided in only 7 states and 1 province. Two state respondents indicated that the state provided hearing aids. It was noted that 3 provinces and 2 states pay expenses for students to attend Gallaudet College.

Among the others kinds of assistance given in the replies were night school programs, home instruction, scholarships, parent counselling, further academic training, therapeutic and diagnostic assistance, and work study programs. One state was reported to be providing employment security.

General Administration

The supervising, financing and other general administration of education programs for the hearing handicapped has many variations but the state or provincial education departments do, in most cases, play some part in the areas of curriculum, supervision, financing, teacher selection and teacher qualification. This is shown by the replies listed in Table III.

Table III Administration of School Programs for the Hearing Handicapped by State and Provincial Departments of Education

Area of Administration	No. of Departments Administering			
	Partially		Fully	
	U.S.	Can.	U.S.	Can.
Curriculum	13	4	4	4
Supervision of Schools	19	2	5	6
Financing	19	2	7	6
Teacher Selection	10	3	4	5
Teacher Qualifications	9	3	15	6

In 22 states and 5 provinces local school boards are reported as assuming partially or fully the general administration and financing of programs. In only 5 are churches credited with assuming part of this. Various kinds of other private organizations reportedly play a part in 9. This part of the questionnaire was ignored by many respondents so consequently does not yield conclusive information.

Departmental Ratings of the Hearing Handicapped School Populations

Tables IV(a) to IV(e) list the numbers of responses for the various categories appearing on Page 3 of Questionnaire A. This section was completed or partly completed by respondents from only 21 states and 8 provinces.

Table IV(a) Ratings of Total Hearing Handicapped School Populations by State and Provincial Education Departments

		Percent of the Profoundly Deaf								Percent of the Partially Hearing							
		1-25		26-50		51-75		76-100		1-25		25-50		51-75		76-100	
	Age	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can
Are being educated in residential schools	2-5	3	1	3	1	1		4		6	1	1	1				
	6-9	3		3	2	3	1	6	3	7	1	2		1	2		1
	10-13	2	1	3	1	3	1	6	3	6	1	2		1	3		1
	14-16	2		3	2	2		7	4	6	2	2		1	1		1
	17-20	3	2	3	1	2		4	3	7	2	1					2
Are attending day classes for the deaf	2-5	4		3		2	1	2	1	2		2		2	1	3	1
	6-9	5	1	4	1	2	1			4	2	2		2		4	
	10-13	5	1	3	1	2	1			3		3		1		3	
	14-16	5	2	4		1	1			3		4				2	
	17-20	7	2	2	1					4		2				2	
Are attending classes for deaf and partially hearing	2-5	4	2	2			2	1	1	2	1	3		1	3	1	2
	6-9	5	1					1		3	2	2	1	1	1	1	1
	10-13	2		1		1		1	1	1	1	2	1	1	1	2	1
	14-16	4	1			1	1	1	1	2	1	2	1	1	1	1	
	17-20	3	1		1	1		1		1	1	2	1	1		1	
Are attending classes with hearing children	2-5	4		1						2		2		3		3	
	6-9	6	1	2		1				6	1	1	1	4		5	
	10-13	6	2	2						3	1	2	1	4		5	
	14-16	7	2	1		1				3	2	2		4		7	1
	17-20	6	2		1	1				2	2	1		5		5	1

Note - figures indicate number of respondents from 21 states and 8 provinces.

: IV(b) Ratings of Total Hearing Handicapped School Populations by State and Provincial
:tion Departments

		Percent of the Profoundly Deaf								Percent of the Partially Hearing							
		1-25		26-50		51-75		76-100		1-25		25-50		51-75		76-100	
	Age	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can
Are being	2-5	1		2	1	2		9	4	2	1	1	1	3		9	5
instructed	6-9	1	2	2		2		6	4	2	1			3	1	11	4
by purely	10-13	1	2	3		2		4	4	3			1	3		10	5
oral methods	14-16	5	2			1		5	4	3	1	1		2		9	5
	17-20	4	3			1		4	3	2	1	1		2		7	4
Are being	2-5	3	1					1		1	1	2					
instructed	6-9	6	2	2		1	1	3		4	2	1	1	2		2	
by partially	10-13	3	2	4	1			3	1	2	1	1		2		1	
oral methods	14-16	4	1	2	1	1	1	3	1	3	1	2				1	
	17-20	5	3			2	1	3		1	1	2		1		2	
Are receiv-	2-5	3	1							3	1						
ing little	6-9	4	1							4	1						
or no oral	10-13	2	2	1						3	1			1			
instruction	14-16	2	3			1				3	1			1			
	17-20	1	2	1	1					1		1		1			

Note - figures indicate number of respondents from 21 states & 8 provinces.

Table IV(c) Ratings of Total Hearing Handicapped School Populations by State and Provincial Education Departments

	Age	Percent of the Profoundly Deaf								Percent of the Partially Hearing							
		1-25		26-50		51-75		76-100		1-25		25-50		51-75		76-100	
		U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can
Are using amplification most of the time	2-5	1	1	1		3		8	4	1	1	1		6		5	5
	6-9	1			1	4		8	4	2	1	2		5		8	5
	10-13	1			1	4		8	4	2	1	2		5		8	5
	14-16	2	1	2		3	1	6	4	1		3		4		8	5
	17-20	3	2	1		3		5	3	2	1	2		3		6	4
Use amplification part of the time	2-5	2	1	1		1				2	1	2				1	
	6-9	4	2	1		1				5	2	3			1	1	
	10-13	3	1		1	1				3	1	3	1			1	
	14-16	4		2	2	1				4		3	1			1	
	17-20	3	2							4	1	1				1	
Use amplification infrequently if at all	2-5			1						3			1				
	6-9	4	3							3	2						
	10-13	3	2		1					5	1		1				
	14-16	3	1	1	1	1	1			4	1						
	17-20	3	1			1			1	3	1						

Note figures indicate number of respondents from 21 states & 8 provinces.

Table IV(d) Ratings of Total Hearing Handicapped School Populations by State and Provincial Education Departments

		Percent of the Profoundly Deaf								Percent of the Partially Hearing							
		1-25		26-50		51-75		76-100		1-25		25-50		51-75		76-100	
	Age	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can
Show evidence of gaining competency in oral communication	2-5	2	1	5		1		1	2		2	3		3		4	3
	6-9	3	1	4	2	3	1	2	1	1	1	2		4	1	8	5
	10-13	3	2	2	1	4		2	1	1		1	1	5		8	4
	14-16	3	2	2	1	5		1	3	1	1	2		3		8	5
	17-20	3	4			6		1	1	1	1	2				8	4
Show evidence of developing competency in reading comprehension	2-5	2	1	2		2		2		2	1	1		2		4	
	6-9	1	1	3		4	1	4	3		1	1		7		8	5
	10-13	1	1	1		7	1	2	3				1	7		8	4
	14-16	2	1	1		4	1	4	4			1	1	6		7	4
	17-20	1	1		1	6	1	3	2		1	1		3		7	3
Show evidence of gaining competency in written communication	2-5	3	1			5		3		2	1			3		4	
	6-9	1	1	1		7		4	4		1			8		8	5
	10-13	1	1	1		7		3	4				1	7		8	4
	14-16	1		2	1	4		5	5		1	1		6		7	4
	17-20	1	1		1	6		4	3		1	1		3		7	3

Note figures indicate number of respondents from 21 states & 8 provinces

Table IV(e) Ratings of Total Hearing Handicapped School Populations by State and Provincial Education Departments

		Percent of the Profoundly Deaf								Percent of the Partially Hearing							
		1-25		26-50		51-75		76-100		1-25		25-50		51-75		76-100	
	Age	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can	U.S.	Can
Started formal education before age 5 years	2-5	1	1	2		5		6		2	2	2		4		5	3
	6-9	4	1	4	1	4	1	5		4	1	3	1	5	2	3	1
	10-13	4	3	2		3	1	5		5	2	3		2	1	3	
	14-16	6	4	2	1	2		5		4	1	3	1	2		3	
	17-20	4	2	2		2	1	5		5	1	3	1			3	
Started formal education after age 6 years	2-5	8				2			1	4		3		1			1
	6-9	6	1	3	2	1		3	2	4	3	6	2	2		1	1
	10-13	5	1	4	1	1		1	3	4	1	6	1	1		1	3
	14-16	3	1	4	1	1	1	2	3	3	1	6		1	1	1	4
	17-20	3	1	2		3	1	1	4	1	1	5		2	1	1	2
Have other physical handicaps than hearing loss	2-5	5	3	4	1	2				4	5	3				1	
	6-9	9	5	4	1	1				11	6	2		1			
	10-13	7	5	4	1	1				10	4	1		1			
	14-16	8	4	3	1	1				9	4	2		1			
	17-20	6	4	2	1	1				6	4	1		1			

Note - figures indicate number of respondents from 21 states & 8 provinces.

Comments and Trends for the Future

In Item 7, Page 4, Questionnaire A, respondents were invited to make comments about the questionnaire or to indicate what they consider to be trends for the future. Several made use of this opportunity, mostly to list trends. Of these, five mentioned a stress on setting up preschool programs and another said lowering the admittance age to three years was being considered. Four said that their state or province is endeavoring to increase counselling and education for parents.

Two departments of education were reported to be in the process of establishing continuous programs of education from preschool through secondary level. Two replies expressed concern for the need for programs geared to the needs of multiply handicapped children who have impaired hearing.

Single respondents indicated that their states were working or planning in such areas as:

(a) The general field of the handicapped even though no programs are yet in existence.

(b) A state registry for the handicapped.

(c) State schools.

(d) Integration of hearing impaired students with supportive assistance under state funding.

(e) Mandatory training in area of specialization for all teachers of classes for hearing impaired.

(f) Work-training programs (sheltered workshops, etc.)

(g) Multi-media presentations to deaf pupils.

(h) A state council for the hearing impaired.

(i) A classroom unit under the state foundation program to include hearing impaired.

(j) More day school programs for the deaf.

(k) Better and earlier assessment of hearing impairment.

With respect to this section of Questionnaire A several respondents offered to assist further with this study if requested to do so but two found that the questionnaire was too long and not too meaningful. Another suggested that the vocabulary used in (h), (i), and (j) of page 3 might cause some invalidity in the results because of possible variations in interpretation. The latter points are well taken because they help in assessing the limitations of the survey. The former are appreciated for their encouragement as well as their offers of further assistance.

B. School Programs

Questionnaire B replies were received from 48 of the 90 schools which were mailed the questionnaires. For purposes of study and comparison, these 48 schools can be classified into five categories: United States Public Residential

Schools, United States Public Day Schools, United States Private Day Schools, Canadian Public Residential Schools, and Canadian Public Day Schools. Table V shows the number of schools which fall into each category.

The day schools are classes within larger school units or are individual school units which have no pupils in residence. Nearly all of these are under the jurisdiction of local school authorities or local private organizations. One Canadian Public Day School is operated by a provincial department of education. The residential schools are all state or provincial schools.

Table V Classification of Schools

School Classification	No. of Schools
United States Public Residential	6
United States Public Day	26
United States Private Day	5
Canadian Public Residential	5
Canadian Public Day	6

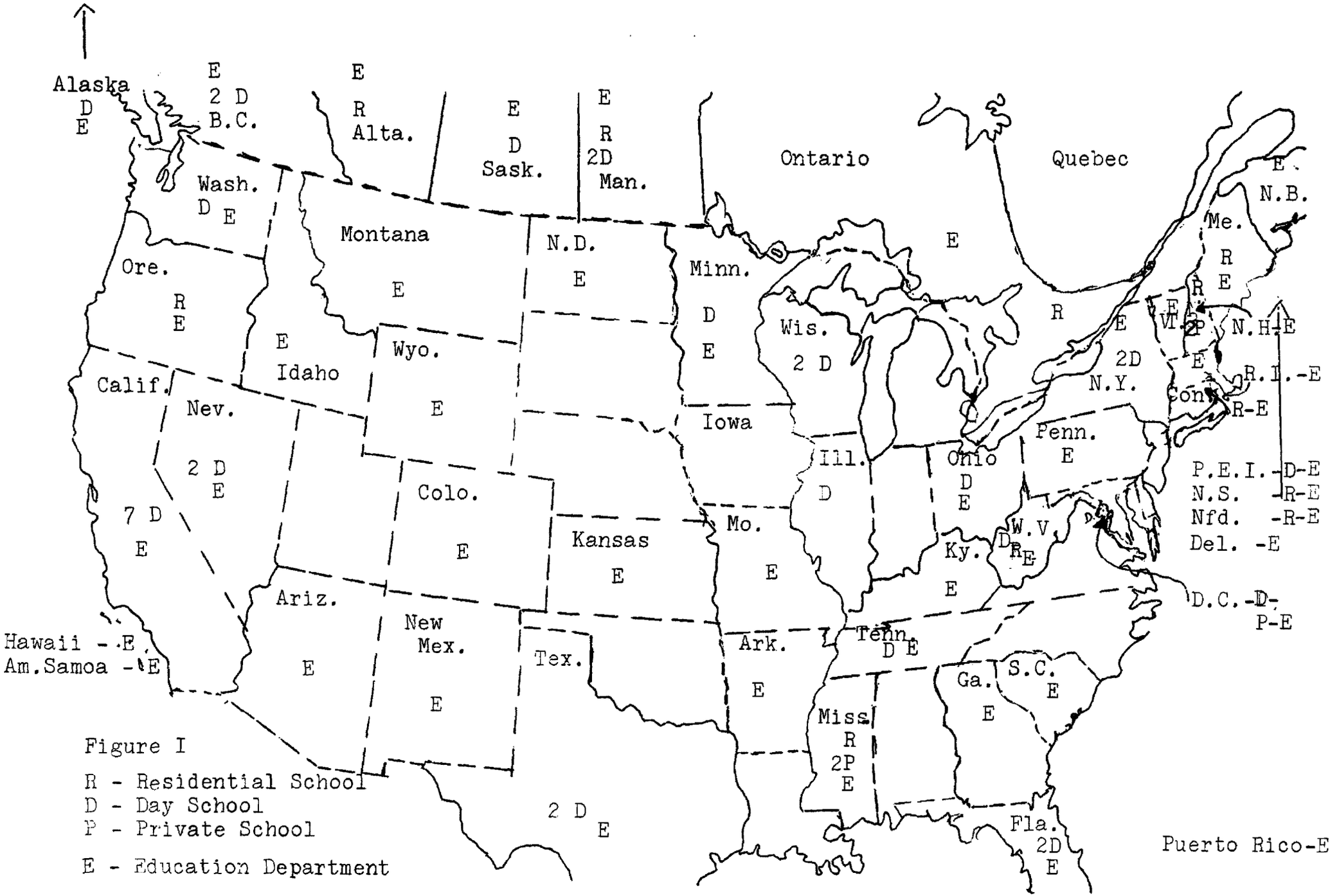

Figure I

R - Residential School
D - Day School
P - Private School

E - Education Department

The map in Figure I shows the geographical distribution by states and provinces of these schools.

Schools within the five classifications vary considerably in several basic respects. The differences in size of staff, size and distribution of pupil enrolment, and the median age at which pupils enter and leave the programs are listed in Tables VI, VII, and VIII. The numbers under the heading "School" serve only for identification. They do not rate or rank order the schools in any way.

Table VI Staff and Pupil Statistics for United States Public Residential Schools

School	Teachers		Total Pupils		Partially Hearing					Median Age Part.Hearing		%PST**
						Age in Years						
	Full	Part time	Day	Res.	Total	1-6	6-8	9-11	12+	Enter	Leave	
1	125	0	325	625	*950	225				3	20	
2	22	2	1	155	*156	15	32	41	58	5	18	1-25
3	45		20	268						12	21	1-25
4	19	1	3	113	*116	10	25	34	47	5	17	1-25
5	49	1	35	240								76-100
6	39		12	175	16	0	1	3	12	14	18	0-1

*These figures may indicate a misinterpretation of the term "partially hearing."

**%PST indicates the percent of pupils who have had preschool training.

Table VII Staff and Pupils Statistics for United States Public and Private Day Schools

Public Day School	Teachers Full	Teachers Part time	Total Pupils	Partially Hearing Total	1-6	6-8	9-11	12+	Median Age Part.Hearing Enter	Leave	%PST
1	8	0	17	17	2	5	1	9			1-25
2			110								
3	18	0	450	36	12	4	15	5	4	12	50-75
4	4	0	810	38	11	9	15	3	3.9	12.2	50-75
5	7	0	63	63	11	25	17		3	12	1-25
6	1		17	17	2	5	1	9			0
7	16	0	131	131	34	52	33	12	4	12	1-25
8	45	0	367	53		21	25	7	6	12	1-25
9	4		64	64	0	11	25	28	6	18	1-25
10	22	0	220	220					3	18-20	
11	4	3	82	82	30	18	10	24	7	18	76-100
12	8	1	60	60	18	14	18	10	3	18	1-25
13			65	65	-28-		21	9			
14	9	2	650	140	30	30	35	35	3	20	75-100
15	1	1		7	4	3	0	0	3		50-75
16	1	0	9	9	1	5	2	1	5	12	1-25
17				22	1	14	5	2	6	14	76-100
18	1	0	10	10	0	10	0	0	7		30
19	25	0	185	39	0	18	21		6		0
20	2		16	16		8	6	2	7	12	50-75
21	19	0	157	157	12	39	71	35	6	14	10
22	7	1	70	70	32	20	14	4	2.5		1-25
23	7		43	43	7	8	13	15	5		1-25
24	1		8	8	0	2	3	3	7	16	0
25	28	0	215	215	43	53	56	63	3	20	76-100
26	7	1	59	59	12	10	18	19	4	16	1-25
Priv. Day School											
1	2	1	17	17	2	4	10	1	4	12	1-25
2				15	13	1		1	2.5	5	1-25
3			31						3	15	
4	2	0	20	1			1		10		
5	1	1	3	3	1	3			4	6	76-100

*%PST indicates the percent of pupils who have had preschool training.

Table VIII Staff and Pupil Statistics for Canadian Residential and Day Schools

Res. School	Teachers Full	Teachers Part time	Total Pupils Day	Total Pupils Res.	Partially Hearing Total	Age in Years 1-6	6-8	9-11	12+	Median Age Part. Hearing Enter	Leave	%PST
1	22	0	16	103	0	0	0	0	9	5	18	26-50
2	19	0	93	50	143*	0	30	38	75	6	21	76-100
3	20	0	26	100	126*	2				6	18	1-25
4	50	0	68	214	282*	35	44	79	124	6	18	1-25
5			2	462						5	20	1-25
Day School												
1	1	0	4	0	4	1	2	1		7	10	50-75
2	3		24		24	0	8	14	2			50-75
3	1		8		8	0	2	4	2	8	14	26-50
4	4	2	61		61							1-25
5	2	2	15		15	1	4	4	6	5		1-25
6	1		19#		19#	0	4	3	12	Kg***	HS***	few

*These may indicate a misinterpretation of the term "Partially Hearing."

**%PST indicates percent of pupils having had preschool training.

***Kg. - kindergarten HS - high school.

#These are integrated pupils.

In addition to the information about staffs and pupils shown in Tables VI, VII and VIII pages 2 and 3 of Questionnaire B also yielded information about the extent to which preschool programs have been used and where preschool training is obtained. Tables VI to VIII have already shown the percent of pupils who have had preschool training. Table IX lists the various sources of preschool training reported and the number of schools having pupils from each source.

Table IX Sources of Preschool Training

	Res. Schools		Day Schools		
	US(6)*	Can(5)	U.S. Pub(26)	U.S. Pr.(5)	Can(6)
(a) At home with parents who have guidance by correspondence	2	1	8	2	2
(b) Under a private therapist	3		4	1	
(c) Under clinical guidance	2		13	1	2
(d) In a preschool program for the hard of hearing	4	3	11	3	2
(e) In preschool programs for hearing children	3		4	1	1
(f) Others: Residential school	1				
Hearing Society Program (Undefined)			1		

* Figures in parentheses show total schools in the category.

The replies to Item 4, page 2, of Questionnaire B showed marked variations in the time basis upon which hearing handicapped children receive this preschool training. Table X lists the five time categories used and the numbers of schools from each of the five school categories which have pupils trained on these various schedules.

Table X Amount of Time Spent Weekly on Preschool Training

	Res. Schools		Day Schools United States		
	*US(6)	Can(5)	Pub(26)	Pr(5)	Can(6)
(a) 5 full days per week	1	1	3	1	0
(b) 5 half days per week	2	3	12	1	3
(c) 1 or 2 lessons per week			3	1	1
(d) 3 or more lessons per week			2		
(e) less frequently than 1 lesson per week	2	1	2		

* Total number of schools in the category are given in parentheses.

Only three respondents from the United States Public Day Schools indicated that preschool training is required in their states by state law. One Canadian Residential School reply indicated that provincial law required the provision of preschool training.

Table XI shows several arrangements under which preschool programs operate. Again the figures indicate the number of schools in each category from which the type of operation was reported.

Table XI Types of Operation Reported for Preschools

	Res. Schools		Day Schools		
	U.S.	Can.	U.S. Pub.	U.S. Pr.	Can.
Eligible for State or Provincial grants but instituted by local Educational Authorities	2	2	15	1	1
Operated mainly by local Educational Authorities		1	9		
Operated by private individuals or groups	3	3	7	3	2
Operated by other arrangements:					
With Federal aid			2		
Tuition fee charged				1	
Public Health Dept.			2		
State School	1				
John Tracy Clinic			1		
Home visits		1			

The use of amplification and basic instructional procedures vary from school to school and with age and degree of hearing loss. Tables XII(a) and (b) and Tables XIII(a), (b), (c), (d), (e), and (f) show the numbers of schools in which various uses are made of amplification and instructional methods. Three age groups are designated, A - 2 to 8 years, B - 9 to 13 years, C - 14 years and over. The types of schools are indicated in the titles of the tables and within the tables themselves.

Table XII(a) Degree of Hearing Loss and Use of Amplification in Residential Schools

	Percent	None			1-25			26-50			51-75			75-100		
	Group	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Have average hearing losses of less than 50 dB.	U.S.A.	1			3	3	3									
	Canada	4	4	3	1	1	2									
Have average hearing losses of between 50 dB. and 65 dB.	U.S.A.				5	4	2						1			
	Canada	2	1	1	3	4	4									
Have average hearing losses between 65 dB. and 80 dB.	U.S.A.				1	2	3	3	1		1	1	1			
	Canada				4	4	4	1	1	1						
Have average losses of greater than 80 dB.	U.S.A.				2	1	2	1			2	3	2			
	Canada							1	2		4	2	4		1	1
Have less than 80 dB. loss and use amplification most of the time (either individual aids or group aids)	U.S.A.				1	1	1	1	2	2	1					
	Canada				2	1	1		2	1	2			1	2	2
Have less than 80 dB. loss and use amplification only infrequently	U.S.A.	2	2	1				1	1	1			1			
	Canada	1	1	1	3	3	3									

A= 2 to 8 years of age B= 9 to 13 years of age C= 14 years and over

Table XII(b) Hearing Loss and Use of Amplification in Public and Private Day Schools

	Percent	None			1-25			26-50			51-75			75-100		
	Group	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Have average hearing losses of less than 50 dB.	U.S.A.	5	1	1	8	9	2	3	2	2	1	1				
	Private	1												1	1	
	Canada	2	2	2	1	2										
Have average hearing losses of between 50 dB. and 65 dB.	U.S.A.	1			8	7	2	5	4	2	3	4	1	1		
	Private	1	1		1											
	Canada				2			1	1	1	2	2	1			
Have average hearing losses between 65 and 80 dB.	U.S.A.	1	2		9	6	2	5	6	1	1	1		1		1
	Private	1	1					1								
	Canada				2	1						2	1			
Have average losses of greater than 80 dB.	U.S.A.	6	3	1	5	4	1	4	4		2	1	3			
	Private	1			1											
	Canada		1					1	1				1	1		
Have less than 80 dB. loss and use amplification most of the time (either individual aids or group aids).	U.S.A.				1	2			1	1	2	1		16	11	6
	Private	1									1					
	Canada										1	1		1	3	2
Have less than 80 dB loss and use amplification only infrequently.	U.S.A.	6	7	2	8	4	1					1	1	1	1	1
	Private	2														
	Canada				1	1										

A= 2 to 8 years B= 9 to 13 years of age C= 14 years and over

(III (a) Oral and Manual Instruction in Residential Schools

	Percent	None			1-25			26-50			51-75			75-100		
	Group	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
; basically oral instruction, ;ed by reading and writing	U.S.A.			1			1		1	2	1			4	4	1
	Canada	1	1	1			1		3	1				4	2	2
Receive both manual and oral instruction.	U.S.A.	4	3	1	1		1		1	1			1	1	1	1
	Canada	1			2		1		2	2				1	1	1
Receive most instruction manually with support of reading and writing.	U.S.A.	5	4	4												
	Canada	2	1	1	2	3	2		1	1						

A = 2 to 8 years of age B = 9 to 13 years of age C = 14 years and over

XIII(b) Segregated and Integrated Instruction in Residential Schools

	Percent	None			1-25			26-50			51-75			75-100		
	Group	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
e instruction only in s for the hard of hearing.	U.S.A.	2	1	2	1	1	1							1	1	
	Canada	3	3	3	1	1	1									
Receive instruction with hearing children and in special programs designed for hard of hearing.	U.S.A.	3	2	3	1	1										
	Canada	2	3	2	1		1									
Receive nearly all instruction in classes designed primarily for hearing children	U.S.A.	4	3	3												
	Canada	3	3	3			1									
Receive instruction by other arrangement.	U.S.A.	2	1	2	1	1	1*									
	Canada		2	1			1	1#		1						

* Tutor
\# Preschool

A = 2 to 8 years of age B = 9 to 13 years of age C = 14 years and over

XIII(c) Compensating for Other Than Hearing Disabilities in Residential Schools

	Percent	None			1-25			26-50			51-75			75-100		
	Group	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
ıother disability other mpaired hearing	U.S.A.	2			2	3	3									
	Canada			1	3	4	3	1	1	1						
Receive special help for second or third handicap.	U.S.A.	1			3	3	3									
	Canada				4	5	4									

A = 2 to 8 years of age B = 9 to 13 years of age C = 14 years and over

XIII(d) Oral and Manual Instruction in Public and Private Day Schools

	Percent	None			1-25			26-50			51-75			75-100		
	Group	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
e basically oral instruc- supported by reading and writing.	U.S.A.				1						1			2	15	9
	Private													2	1	
	Canada													5	5	3
Receive both manual and oral instruction.	U.S.A.	16	13	7	1	1										
	Private	1	1		1											
	Canada	1	1	1												
Receive most instruction manually with support of reading and writing.	U.S.A.	16	13	5												
	Private	2	1													
	Canada	1	1	1												

A = 2 to 8 years of age B = 9 to 13 years of age C = 14 years and over

XIII(e) Segregated and Integrated Instruction in Public and Private Day Schools

	Percent	None			1-25			26-50			51-75			75-100		
	Group	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
e instruction only in s for the hard of hearing.	U.S.A.	3	4	3	1	3		4		1		2		9	6	2
	Private		1								1			1	1	
	Canada		1		1	1					1	2	1	1		
Receive instruction with hearing children and in special programs designed for hard of hearing	U.S.A.	6	5	2	5	4	1	2	1	1	1	1	1	3	4	1
	Private	1	1													
	Canada				1	1	1		1			1		1	1	1
Receive nearly all instruction in classes designed primarily for hearing children.	U.S.A.	10	8	2	2	3				1			1	4	3	2
	Private															
	Canada	1	1													
Receive instruction by other arrangement (in Public Schools)	U.S.A.	10	7													
	Private				2											
	Canada															

A = 2 to 8 years of age B = 9 to 13 years of age C = 14 years and over

(III(f) Compensation for Other Than Hearing Disabilities in Public and Private Day
;

	Percent	None			1-25			26-50			51-75			75-100		
	Group	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Have another disability other than impaired hearing.	U.S.A.	3	4	2	13	7	2	3	2	2						
	Private				1											
	Canada				1	1	2	1	1							
Receive special help for second or third handicap.	U.S.A.	9	9	2	9	5	1	1	2							
	Private				1											
	Canada						1	1	1							

A = 2 to 8 years of age B = 9 to 13 years of age C = 14 years and over

Optimum Value from Hearing Aids

Nearly all respondents felt that hearing aids are of optimum value when worn nearly all of the child's waking hours. This was the reply from nineteen U.S. public day schools, six Canadian day schools and two U.S. private schools as well as five U.S. residential schools and five Canadian residential schools. One respondent remarked that this is important even to the deaf. Only one U.S. Public and one U.S. private school respondent felt that aids are required only in communication situations and only one U.S. public school respondent thought that aids give optimum value only when children are motivated to listen.

Another respondent from a U.S. public school raised the question "How about wearing aids during sleep?" and two others commented that the question of the use of aids depends upon the child. Still another suggested that the use of group aids in class plus individual aids out of class was best.

Type of Amplification Most Satisfactory for Classroom Instruction

Tables XIV (a) and (b) indicate the number of respondents from schools who rated the various types of amplification as first, second, third or fourth place in value for classroom instruction.

Table XIV(a) Types of Amplification Most Suitable for Classroom Instruction (Residential Schools)

Type of Hearing Aid	Number of Schools Giving Ratings							
	U.S.A. (6)*				Canada (4)*			
Rating	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Individual body model hearing aid		2	2	2	1		3	
Individual ear level hearing aid			1	2		1	1	2
Group aid with fixed control boxes and headsets	1	1		2	2	2		
Induction loop system with individual hearing aids	3	1			2	1		

*Numbers in parentheses indicate total number of schools from which ratings were received.

Table XIV(b) Types of Amplification Most Suitable for Classroom Instruction (Public and Private Day Schools)

Type of Hearing Aid	Number of Schools Giving Ratings							
	U.S.A. (21)*				Canada (4)*			
Rating	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Individual body model hearing aid	4	8	7	1	3		1	
Individual ear level hearing aid	4		5	10	1			1
Group aid with fixed control boxes and head sets	5	9	4	2	2	1		
Induction loop system with individual hearing aids	12	6	2	1	1	1	1	
Others	2			1				

* Numbers in parentheses indicate total number of schools from which ratings were received.

Class Settings and Their Evaluation re Academic Growth and Speech Development

Table XV shows the numbers of respondents who rated the various class settings as best, second, third and fourth best for providing academic growth and speech development.

Table XV Class Setting and Academic Growth Ratings

Class Setting	U.S. Res.				U.S. Day				Can. Res.				Can. Day			
Rating	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
In special classes for the partially hearing	2	3			7	7	4		1	1			4	1		
In special classes for the partially hearing and deaf		2	2	1	1	3	4	7				1		1	1	
In classes with hearing children	1			3			3	6				1	1			2
In classes with hearing children when out of class assistance is given by "specialists"	1		2	2	9	5	6	2		1	1		3	1	1	
In special classes where partial integration with hearing children is a regular part of the program	1		1	2	7	5	5	1	1		1		2	1	1	1
Total Number of Schools from which ratings were received			5				22				2				5	

Selection of Pupils for Programs for the Partially Hearing

Forty respondents replied to the section of the questionnaire dealing with criteria used for selecting the pupils who are placed in programs for the partially hearing and 37 of them ranked the various criteria in order of importance from 1, most important, to 9, least important. Three of the schools simply indicated that certain criteria were used but did not rate them. Respondents were encouraged, in the instructions, to use the same ratings for more than one criterion if they considered them to be of equal importance. The results are shown in Table XVI as means of the ratings given by the number of schools shown in parentheses under the means.

A small number, therefore, indicates a high general preference for the criterion and a large number indicates a low similar preference.

Table XVI Means of Ratings of Criteria for Selection of Pupils for Programs for Partially Hearing

Criteria	U.S.Res.	U.S.Day	U.S.Priv.	Can.Res.	Can.Day
Pure-tone Audiometric test	1.75 (4)	1.65 (20)	1.50 (2)	1.50 (4)	2.00 (4)
Extensive hearing sensitivity assessment	1.50 (4)	1.95 (18)	1.00 (2)	1.67 (3)	2.00 (4)
Otological examination	1.75 (4)	1.52 (22)	1.00 (2)	2.25 (4)	3.20 (5)
Failure to function well in classes for hearing children	2.00 (4)	2.28 (18)	2.50 (2)	2.25 (4)	1.80 (5)
Retarded language development	2.00 (2)	2.48 (19)	1.00 (2)	2.00 (3)	3.50 (2)
At least average intelligence rating	2.00 (3)	3.40 (15)	1.50 (2)	2.00 (2)	4.00 (2)
Superior intelligence rating	4.00 (2)	6.67 (6)	3.00 (1)	1.50 (2)	9.00 (1)
Normal emotional stability	2.50 (4)	4.23 (13)	2.00 (1)	1.50 (2)	5.00 (2)

Note - Numbers in parentheses indicate number of schools which gave ratings.

In addition to the criteria reported in Table XVI one Canadian day school respondent considers social and environmental factors as ranking third in importance and another Canadian day school reply indicated the benefit derived from amplifying units in class as rating one as a criterion for selection of pupils. A single mention of child guidance assessments and referral by classroom teachers was made by a

respondent from another Canadian Day School. Similarly one U.S. day school respondent indicated that psychological examinations were used, a second mentioned use of "an educational test" and a third said that the manner in which a child responds with a teacher trained in working with the hearing impaired was considered. In one U.S. private school other physical handicaps are considered among the criteria for selection.

A single U.S. residential school was noted as using a team evaluation as part of the selection procedure.

Time Devoted to Instruction in Various Subject Fields

Respondents from 16 U.S. day schools, 4 U.S. residential schools and 2 Canadian residential schools gave percent of school day devoted to subject areas as requested on page 6 of Questionnaire B. The means of these percentages were taken for each age group (under 6 years, 6 - 9 years, 10 - 12 years, 13 - 15 years, and 16 years and over) and for each class of school. These means are reported for U.S. Day Schools in Table XVII(a) and for U.S. and Canadian Residential Schools in Table XVII(b).

Table XVII(a) Time Devoted to Various Subjects in U.S. Day Schools Shown in Means of Percentages

Subjects	Age of Pupils in Years 1-6	6-9	10-12	13-15	16+
No. of Schools	12	15	15	6	3
(a) Auditory Training	20	15	10	12	10
(b) Speech Therapy	16	17	11	14	20
(c) Formal Language	12	13	18	20	34
(d) Informal Language	24	19	15	13	15
(e) Reading	9	19	16	11	10
(f) Creative Play	16	6			
(g) Arithmetic	2	11	12	11	10
(h) Science	2	3	4	9	8
(i) Geography	1	2	5	7	8
(j) History	1	2	4	7	8
(k) Physical Education	4	6	8	10	8
(l) Other Subjects:					
Art & Music*	5	6	7	8	
Speech Reading*	18	13	15	29	50
Individual Work*		12	12	12	12

* Means for only 3 schools.

It was impossible to report means for Canadian day schools because their respondents either grouped the subjects into large groupings or made the statement that scheduling is done to meet the needs of the individual child with emphasis on flexibility. Similar comments came from two U.S. day schools and the private schools failed to provide enough information for a tabulation to be made.

Table XVII(b) shows the averages for the four U.S. residential schools and two Canadian residential schools. Only one set of responses for Canada is included in the 16 years and over group and in the vocational section. It is recognized that the few schools represented in this table make it impossible for the reader to reach conclusions about general practices with any degree of accuracy. The means for these schools are included as reported for information about questionnaire results and should not be used to draw general conclusions about how much time is spent in each subject by students in residential schools.

Table XVII(b) Time Devoted to Various Subjects in 4 U.S. and 2 Canadian Residential Schools Shown in Means of Percentages

Subjects	Age of Pupils in Years									
	1-6		6-9		10-12		13-15		16+	
	U.S.	Can.	U.S.	Can.	U.S.	Can.	U.S.	Can.	U.S.	Can.
(a) Auditory training*	43	25	36	15	33	15	28	5	28	
(b) Speech therapy#	26	25	18	25	13	20	7	8	6	10
(c) Formal language	8		13	13	16	10	13	18	13	15
(d) Informal language	14	15	8	10	6	10	4	5	4	10
(e) Reading	16	10	18	10	18	10	14	15	13	10
(f) Creative play	6	15	5	8	5	5				
(g) Arithmetic	6	5	10	5	11	5	13	15	10	10
(h) Science		2	8	2	8	8	10	10	10	10
(i) Geography		2	3	2	5	5	7	5	7	7
(j) History		2	3	2	6	5	7	5	7	7
(k) Physical education	4	2	5	5	6	8	6	8	6	10
(l) Other subjects:										
Vocational (3sch.)							12	20	17	50
Industrial Arts & Home Ec. (1sch.)					5		10		5	
Arts & Crafts(1sch.)					5		10		5	
Mech. Drawing(1sch.)							5		5	

*These averages for U.S. schools are abnormally high because one school considers auditory training as a continuous activity going on 100% of the time. When this school is excluded the averages would be 24, 15, 10, 4 and 4.

#It is assumed here that the term "speech therapy" is used in the broad sense of total speech development involving language growth not just the correction of speech defects.

Use of Audio-Visual Aids

Of the 34 day schools and 11 residential schools from which reports on audio-visual aid use was received the great majority were making regular use of several instructional aids usually classified as audio-visual. There is little by way of differences among the various classification of schools: U.S. Residential, U.S. Day, Private Day, Canadian Residential and Canadian Day. Ninety percent or more of all these schools make regular use of reading charts, phonetic charts, chalkboards, models including toys, counting beads and blocks. On a regular basis, over 75% use maps, globes, disc recordings of music, dramatizations by pupils or teacher, group auditory trainers, photographs and filmstrips.

Some differences do exist, however. Over 90% of the residential schools make frequent use of opaque and overhead projectors but only about 30% of the day schools use opaque projectors and fewer than 60% use overhead projectors on this basis. A similar difference exists with the use of television. Over 80% of residential schools use sound and captioned movies whereas only 60% of the day schools regularly use sound movies and 35% use captioned films.

With the exception of disc recording of general sounds which are used in about 65% of day schools, fewer than 50% of all schools make use of either tape recordings or disc recordings of speech and other sounds. Likewise language masters are not widely used. Only about 40% of schools use them. Only about 25% of schools make regular use of radios.

Schools listed other audio-visual aids which they use regularly but none of these were mentioned by more than one school. Included were: phonic mirrors, language loops, reading materials, teacher made materials, super 8 camera and projector, pictures, flannel board, bulletin board, SRA kits*, encyclopedia and slides.

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*These are programmed lessons in subjects such as reading, language, and science published by Science Research Associates, Inc., Chicago, Ill. 60611.

Frequency of Use of Various Instructional Procedures

Pages 8 and 9 of Questionnaire B asked for indications of how frequently certain instructional procedures are used in the school and an evaluation of each procedure as poor, fair, average or good. The instructions for completing these pages were as follows:

> Indicate how frequently these instructional procedures are used with your pupils. Also indicate how you would rate the value of each as effective producers of sound educational results.
>
> Frequency of Use
> (a) never used
> (b) used infrequently
> (c) used frequently
> (d) used regularly
>
> Evaluation
> (a) poor
> (b) fair
> (c) average
> (d) good
>
> Please fill in one form for each of the following age groups: 2 to 8 yrs., 9 to 13 yrs., 14 yrs. and over.

Tables XVIII(a), (b) and (c) show the number of responses for each age group for each procedure. Each symbol represents one school for which the reply was given. The symbols also indicate the type of school giving the replies.

U - United States Day School
C - Canadian Day School
P - Private School
R - United States Residential School
S - Canadian Residential School

III(a) Instructional Procedures - Frequency of Use and Value

roup 2 to 8 years	Frequency of Use				Evaluation			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Procedures	never	infre-quently	fre-quently	regul-arly	poor	fair	avge.	good
ree creative play ith dress up clothes, locks, etc.		UUUUU UUCCR	UUUUU RRSSS UU	CUUUU RSS	U		UUUUC RRR	UUUUU CRPSS SSSUU U
2. Self-expression activities such as painting and modelling	U	UUCP	UUUUU UUUCR RSS	UUUUU CPRRR SSSUU	U	U	UUUUR RRS	UUUUU UUUUC CCPRR RRSS
3. Field trips (to zoo, stores, etc.)	U	UUUUU UCCRR RS	UUUUU PRRSS SU	UUUUU CS	U	UR	UUUUR R	UUUUU UUUUC CCPRR SSSSS
4. Language motivating group activities (baking a cake, making model forms, etc.)	UC	UUUCR RS	UUUUU UUUPR RRSS	UUUUU UCSS		UURR	UUCR	UUUUU UUUUU CPRRS SSSS
5. Individual pupil activity using teacher prepared learning devices such as word and picture matching		UR	UUUUU UUUR	UUUUU UUUUU CCCCP PRRRS SSSS		UUUR	UCR	UUUUU UUUUU UCCCP RRRSS SSS

U - United States Day School C - Canadian Day School P - Private School
R - United States Residential School S - Canadian Residential School

Table XVIII(a) Instructional Procedures - Frequency of Use and Value (continued)

Age 2 to 8 years	Frequency of Use				Evaluation			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Procedures	never	infre-quently	fre-quently	regul-arly	poor	fair	avge.	good
6. Individual activity with arithmetic learning materials such as Cuisenaire rods, Montessori bead chains, etc.		UUUUP RS	UUUUU UUUUU RRRSS SS	UUUCC CPR		URR	UUUUU UCRRS	UUUUU UCCPR RSSS
7. Science corners, growing things, keeping pets.	UU	UURRS SS	UUUUU UUCPP RRS	UUUUU UUCRS	U	URR	UUUUC RRSS	UUUUU UUUUC PRSSS
8. Story telling from picture books.		UURR	UUUUU UCPRR SSSSS	UUUUU UUUUC	UC	UU	UUUUC RS	UUUUU UUCCP RRRSS SS
9. Discussion centered around slides or filmstrips		URSS	UUUUU UUUUC RRRRS S	UUUUU UUUCC SS	UR	S	UUUUU CRRR	UUUUU UUUUC CRSSS
10. As (9) with movies	U	UURRS	UUUUU UUUUR RSS	UUUUU UCRS		URR	UUUUU URRS	UUUUU UUUCR SSS

U - United States Day School C - Canadian Day School P - Private School
R - United States Residential School S - Canadian Residential School

Table XVIII(a) Instructional Procedures - Frequency of Use and Value (continued)

Age group 2 to 8 years	Frequency of Use				Evaluation			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Procedures	never	infre-quently	fre-quently	regul-arly	poor	fair	avge.	good
11. Dramatization.	U	UUUUU CRRRR	UUUUU PSSS	UUUUC RSS		UU	UUUCR RR	UUUUU UCPRS SSS
12. Reading from exper-ience charts.		UUR	UUUCR R	UUUUU UUUUU UUUUC CPRRS SSSS		UUCR	UUCRR	UUUUU UUUUU UUUCC PRRSS SSS
13. Reading from regular reading series.		URS	UUUUU UUUPR RSSS	UUUUU UUUUC CCPRR		UUURR	UUUPR SSS	UUUUU UUUUC CCRR
14. Reading workbooks.		UUUUU PRRSS	UUUUU UUURR RS	UUUUC CCPS		UUUUR RSS	UUUUU UURRR US	UUCCC CPS
15. Programmed reading.	UUUUU UUCPR RS	UUUUP RSSS	UUUUR	UCCCR	UR	UUURS S	UUUUS	UUCCC PRR

U - United States Day School C - Canadian Day School P - Private School
R - United States Residential School S - Canadian Residential School

Table XVIII(a) Instructional Procedures - Frequency of Use and Value (continued)

Age group 2 to 8 years	Frequency of Use				Evaluation			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Procedure	never	infre-quently	fre-quently	regul-arly	poor	fair	avge.	good
16. Language lessons centered around photographs or movies of special class activities.	UUUR	UUURS S	UUUUU UUUCC RRRSS	UUUUU CPPRS S	R	U	UCRRS	UUUUU UUUUU UUCCP RRSSS
17. Language workbooks.	UUUUP R	UUUUU UURSS	UUUUU CPRSS	UUCRS	RS	UUUUU UUUCR S	UUUUS	UUCPR RSS
18. Programmed language.	UUUUU UUUUP RRS	UURSS	UUUUS	UCPR	UR	UUUCR S	UURS	UUCPU S
19. Arithmetic workbooks.	UP	UUCPR SS	UUUUU UURRS S	UUUUU UUCPR S		UUCPR SSS	UUUUU UUUPR R	UUUUU CRSS
20. Programmed arithmetic.	UUUUU UUURR S	UUUUR S	UUS	URS	UR	UUURS	UUUS	UURS

U - United States Day School C - Canadian Day School P - Private School
R - United States Residential School S - Canadian Residential School

Table XVIII(a) Instructional Procedures - Frequency of Use and Value (continued)

Age group 2 to 8 years	Frequency of Use				Evaluation			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Procedure	never	infre-quently	fre-quently	regul-arly	poor	fair	avge.	good
21. Finger plays, rhymes, action songs.		UUUCP RRS	UUUUU UUURR SSS	UUUUU PSU		CRR	UUUUU URRSS S	UUUUU UUUPS S
22. Rhythm band.	UUPSS	UUUUR RRS	UUUUU UUUUU CPR	UUUSS	UU	UUR	UUUUU UURRS	UUUUU CPRRS
23. Lecture method.	UUUUU UUUUU UUPPR RRSSS SS	UUUCR		UU	UUUUU UUCPR RSSS	UUUR		US
24. Teacher demonstration followed by pupil practice.		UUURS	UUUUU UUUUU CCRRR PSSSS	UUUUU CP	UU	UURS	UUUUU UUCRR SS	UUUUU CCPRS S
25. Teacher lead discussions.	UC	UUUUU URRSS	UUUUU UUUCP RS	UUPRS S	UUU	UURRS S	UUUUU UCR	UUUCR RSSS

U - United States Day School C - Canadian Day School P - Private School
R - United States Residential School S - Canadian Residential School

Table XVIII(a) Instructional Procedures - Frequency of Use and Value (continued)

Age group 2 to 8 years Procedure	Frequency of Use (a) never	(b) infrequently	(c) frequently	(d) regularly	Evaluation (a) poor	(b) fair	(c) avge.	(d) good
26. Pupil led discussions.	UCRRR	UUUUU UUUPR S	UUUUU UUPSS	UC	UUCRR	UURS	UUUUU UUS	UUUUC PS
27. Television instruction.	UUUUU CPPRR RSS	UUUUU UUUSS	UUUUR		UURS	UUUUU PSS	UUU	UUR
28. Radio instruction.	UUUUU UUUUU UUUUC RRRRS SS	UU			UUUUU UCPRR	S	U	U
29. Other programmed subjects.	UUUUS		SS		U		SS	
30. Other instructional procedures.*	S		S	UUUUU R				UUUUU RSS

* Calendar, weather, speech, speech reading, art, clay modelling, reading labs.

U - United States Day School C - Canadian Day School P - Private School
R - United States Residential School S - Canadian Residential School

Table XVIII(b) Instructional Procedures - Frequency of Use and Value

Age group 9 to 13 years	Frequency of Use				Evaluation			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Procedures	never	infre-quently	fre-quently	regul-arly	poor	fair	avge.	good
1. Free creative play with dress up clothes, blocks, etc.	PUUUU UURS	UUUUU UUCCR RSS		USS	UR	UURSS	UUC	UCRSS
2. Self-expressions activities such as painting and modelling		PUUCR	UUUUU UUURR SSS	UUUCC RSS		UR	UUUUR RSS	PUUUU UUUCC CRSSS
3. Field trips (to zoo, stores, etc.)		PUUUU UC	UUUUC RRRRS	UUUUU CSS			UUURR RSS	PUUUU UUUUU CCCRS SS
4. Language motivating group activities (baking a cake, making model forms, etc.)	PUC	UUUUR S	UUUUR RRS	UUUUU CCSSS		R	UUUUR R	UUUUU UUCCR SSSSS
5. Individual pupil activity using teacher prepared learning devices such as word and picture matching.	UU	UUUUR	PUUUU CRSS	UUUUC CRRRS S	U	UUU	RS	PUUUU UUUCC CRRRS SSS

U - United States Day School C - Canadian Day School P - Private School
R - United States Residential School S - Canadian Residential School

Table XVIII(b) Instructional Procedures - Frequency of Use and Value (continued)

Age group 9 to 13 years	Frequency of Use				Evaluation			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Procedures	never	infre-quently	fre-quently	regul-arly	poor	fair	avge.	good
6. Individual activity with arithmetic learning materials such as Cuisenaire rods, Montessori bead chains, etc.	UUS	UUUUU CS	PUUUU RRRSS	UUCRS	US		UUUUU URRSS	PUUUC CRRSS
7. Science corners, growing things, keeping pets.	P	USS	UUUUU UUURR RS	UUUUU CCRSS			UUUUU RR	UUUUU UUCCR RSSSS S
8. Story telling from picture books.		PUUUU UURS	UUUUR RSS	UUCCS S		PUUUS	UUUUU RRS	UUUCC CRSSS
9. Discussion centered around slides or film-strips.		PC	UUUUU UUUUR RRSSS	UUUUU CRSS		P	UUUUC RRSS	UUUUU UUUCR RSSS
10. As (9) with movies.	P	UUS	UUUUU UCRRR SS	UUUUR S		US	UUUUR RS	UUUUU UCRRS S

U - United States Day School C - Canadian Day School P - Private School
R - United States Residential School S - Canadian Residential School

Table XVIII(b) Instructional Procedures - Frequency of Use and Value (continued)

Age group 9 to 13 years	Frequency of Use				Evaluation			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Procedures	never	infre-quently	fre-quently	regul-arly	poor	fair	avge.	good
11. Dramatization.	P	UUUUU UUSR	UUUSS RR	CUUUS			UUUUS SSRR	CUUUU UUUSR
12. Reading from exper-ience charts.	CUU	UUUUU	PUUUS SRR	CCUUU USSSR	U	U	PCUUU SSR	CCUUU UUUSS SRR
13. Reading from regular reading series.		S	UUUUS SSR	PCCCU UUUUU UUUUS RRR		S	PCUUU UUSSS R	CCUUU UUUUS SRR
14. Reading workbooks.		USS	CUUUU RR	PCCUU UUUUU UUSSR	P	USS	CUUUU USR	CCUUU UUUSR R
15. Programmed reading.	UUUUU UUSS	CUSSS R	UUUSR	PCUUR	US	PS	CUUUS RR	CUUUS SR

U - United States Day School C - Canadian Day School P - Private School
R - United States Residential School S - Canadian Residential School

Table XVIII(b) Instructional Procedures - Frequency of Use and Value (continued.)

Age group 9 to 13 years	Frequency of Use				Evaluation			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Procedures	never	infre-quently	fre-quently	regul-arly	poor	fair	avge.	good
16. Language lessons centered around photographs or movies of special class activities	U	PUUUUS	CCUUUUUSSRR	CUUUUSSRR		P	UUUUUUUSSR	CCCUUUUSSSSRRR
17. Language workbooks.	PCUUUS	UUUUSR	UUSR	CCUUUUSSR	P	UUUSR	CUUUUSR	CCUUSSR
18. Programmed language.	PCUUUUUUUUSSR	USSRR	UU	CUU	PUS	SR	CUUS	CU
19. Arithmetic workbooks.	CUS	UUS	UUUSR	PCUUUUUUUSSRR		PUSS	CUUUUR	CUUUUUUSSRR
20. Programmed arithmetic.	CUUUUUUUUSSRR	UUSSR	US	PU	US	USR	PCUUS	U

U - United States Day School C - Canadian Day School P - Private School
R - United States Residential School S - Canadian Residential School

Table XVIII(b) Instructional Procedure - Frequency of Use and Value (continued.)

Age group 9 to 13 years	Frequency of Use				Evaluation			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Procedures	never	infre-quently	fre-quently	regul-arly	poor	fair	avge.	good
21. Finger plays, rhymes, action songs.	PUUS	UUUUU UUUSR RR	UUUS	CSS	UUS	UUUUU USRRR	U	CUSSS
22. Rhythm band.	PUUUU UUUSR	UUSSS RR	CUUU	S	USR	CUUUS SR	U	USSR
23. Lecture method.	CUUUU USSS	PUUUU USSRR R	UUU		CUUUU SS	UUUUS RRR	US	
24. Teacher demonstration followed by pupil practice.		UUUU	PCUUU UUUUU USSR R	CUSSR R	U	PUUU	UUUUU USSSR R	CCUUS SRR
25. Teacher led discussions.	PS	UU	UUUUU UUUUS SSSRR	CUURR		UUU	UUUUU USRR	CCUUU SSSRR

U - United States Day School C - Canadian Day School P - Private School
R - United States Residential School S - Canadian Residential School

Table XVIII(b) Instructional Procedure - Frequency of Use and Value (continued.)

Age group 9 to 13 years	Frequency of Use				Evaluation			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Procedures	never	infre-quently	fre-quently	regul-arly	poor	fair	avge.	good
26. Pupil led discussions.	US	PUUUU SR	CUUUU UUSSS R	CCUR	UR	PUU	CUUUU UUSSR S	CCUUS SR
27. Television instruc-tion.	PCUUS RR	UUUUU USSR	UUUUU S		UR	UUUUS S	CUUUU S	UR
28. Radio instruction.	PUUUU UUUUU USSSS RRR	CU			UUUSS RR	C		
29. Other programmed subjects	UUSR			CC	UR			CC
30. Other instructional procedures*	S			UU				UU

* Overhead projector, reading lab.

U - United States Day School C - Canadian Day School P - Private School
R - United States Residential School S - Canadian Residential School

Table XVIII(c) Instructional Procedures - Frequency of Use and Value.

Age group 14 years & over	Frequency of Use				Evaluation			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Procedures	never	infre-quently	fre-quently	regul-arly	poor	fair	avge.	good
1. Free creative play with dress up clothes, blocks, etc.	URRRS	UURSS S	U	S	URRS	UURS	S	SS
2. Self-expression activities such as painting and modelling.		RR	UUURR SSS	UCSS		R	UURRS	UCRSS SS
3. Field trips (to zoo, stores, etc..	U	R	UUSSS RRRR	UCSS			RRRR S	UUUCR SSSS
4. Language motivating group activities (baking a cake, making model forms, etc.)		RR	RRSSS	UUUUC SS		R	RRS	UUUCR SSSS
5. Individual pupil activity using teacher prepared learning devices such as word and picture matching.	S	URSSS	UR	UURRS	S	URSS	URS	URRS

U - United States Day School
R - United States Residential School
C - Canadian Day School
S - Canadian Residential School
P - Private School

Table XVIII(c) Instructional Procedures - Frequency of Use and Value.(continued).

Age group 14 years & over	Frequency of Use				Evaluation			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Procedures	never	infre-quently	fre-quently	regul-arly	poor	fair	avge.	good
6. Individual activity with arithmetic learning materials such as Cuisenaire rods, Montessori bead chains, etc.	RS	URSS	UURRS	UUC	S	URS	URS	UUCR
7. Science corners, growing things, keeping pets.		URRS	USS	UUCRRSS	R		URSS	UUCRRSSS
8. Story telling from picture books.	URS	UURSS	URRS	C	RS	UURSS	RS	CR
9. Discussion centered around slides or filmstrips.			URSSS	UUUCRRRRSS			RS	UUUCRRRRSSSS
10. As (9) with movies.			URRSSS	UURRRS		R	S	UURRRRSSS

U - United States Day School C - Canadian Day School P - Private School
R - United States Residential School S - Canadian Residential School

Table XVIII(c) Instructional Procedures - Frequency of Use and Value (continued)

Age group 14 years & over	Frequency of Use				Evaluation			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Procedures	never	infre-quently	fre-quently	regul-arly	poor	fair	avge.	good
11. Dramatization.	UR	UUSRR R	UUSSS	S		UURR	USS	USSSR
12. Reading from experience charts.	UUSR	SSRRR	U	CUUSS	UUS	SRR	USSR	CUS
13. Reading from regular reading series.		S	SS	CUUUU USSRR RRR		S	UUSSR	CUUSS RRRR
14. Reading workbooks.	R	SS	UUUSR	CUUSS RRR		S	UUUSS R	CUSSR RR
15. Programmed reading.	US	USSR	SR	CUUUR RR	S	SS	USR	CUURR R

U - United States Day School C - Canadian Day School P - Private School

R - United States Residential School S - Canadian Residential School

Table XVIII(c) Instructional Procedures - Frequency of Use and Value (continued)

Age group 14 years & over	Frequency of Use				Evaluation			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Procedures	never	infre-quently	fre-quently	regul-arly	poor	fair	avge.	good
16. Language lessons centered around photographs or movies of special class activities.	R	RR	UUUSS SR	CUSS		R	UUSR	CUSSS SR
17. Language workbooks.	S	UUS	UUSS	CUSRR RR	U	USS	USSRR	CUSRR
18. Programmed language.	UUSSR R	SSSR	UU	UR	S	SS	USS	UR
19. Arithmetic workbooks.		S	UUUSS S	CUUSR RRR		SS	US	CUUUS SRRRR
20. Programmed arithmetic.	UUSRR RR	SSR	US	CU	RS	US	SS	CU

U - United States Day School C - Canadian Day School P - Private School

R - United States Residential School S - Canadian Residential School

Table XVIII(c) Instructional Procedures - Frequency of Use and Value (continued).

Age group 14 years & over	Frequency of Use				Evaluation			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Procedures	never	infre-quently	fre-quently	regul-arly	poor	fair	avge.	good
21. Finger plays, rhymes, action songs.	UUUSS RRR	SSR	U	S	USSRR	S	SR	S
22. Rhythm band.	UUUSS RRRR	SS	U	S	USRR	USS		S
23. Lecture method.	S	UUSSR	UURR	SSR	USR	UUSS	URRR	SS
24. Teacher demonstration followed by pupil practice.			UUUUS SS	USSRR RRR		U	USSS	UUSSR RRRR
25. Teacher led discussions.		UUSSS	UUSSR RRRR			U	UUSS	USSSR RRRR

U - United States Day School C - Canadian Day School P - Private School

R - United States Residential School S - Canadian Residential School

Table XVIII(c) Instructional Procedures - Frequency of Use and Value (continued).

Age group 14 years & over	Frequency of Use				Evaluation			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Procedures	never	infre-quently	fre-quently	regul-arly	poor	fair	avge.	good
26. Pupil led discussions.		UUSSR	UUSSSR	URR		UUSR	USSSR	USRR
27. Television instruction.	USRR	SSR	USS	UU		US	USS	USR
28. Radio instruction.	UUUSSSSSRRR				USSR			
29. Other programmed subjects.	SS		UU	CC			UU	CC
30. Other instructional procedures*	S		S					S

* Overhead projector.

U - United States Day School C - Canadian Day School P - Private School

R - United States Residential School S - Canadian Residential School

Multiply Handicapped Partially Hearing

Twenty-one respondents indicated provisions which are made for handicaps other than hearing losses. Four specifically stated that physical therapy was being used and three use speech therapy and occupational therapy. Two stated that their schools have classes for the multiply handicapped and three indicated that they have access to programs for the orthopedically handicapped. Psychological services also were mentioned by two respondents. Single mention was made of a variety of other special provisions. These included: tutorial help, Frostig Visual Perception Program, special evaluation procedures, small class, rehabilitative aids and devices, electronic typewriters for cerebral palsied children, McGinnis Method, Lea Program and use of special teachers.

Assessment of the Mental Potential of the Partially Hearing

The recipients of Questionnaire B for Schools were asked to list tests which their schools use for assessing the mental potential of their partially hearing children. A few provided this information and their responses are compiled in Table XIX. Four tests were mentioned but not rated and therefore are not included in this table. They were: Revised Knox Cube Test, Revised Sequin Form Board Test, Stencil Design Test #1, and Revised Porteus Maze Test.

Table XIX Tests Used to Assess the Mental Potential of Partially Hearing Pupils and the Evaluations of these Tests

TESTS	Ratings of Tests			
	Poor	Fair	Good	Excel.
Arthur Point Performance			U	U
Bender Gestalt			US	UU
Columbia Mental Maturity Test				U
Frostig Visual Perception Program			P	U
Gates-Reading Test			S	
Gray-Vorow Reading Test			U	
Goudenough Draw-a-Man			US	U
Hiskey-Nebraska Test of Learning Aptitude			UPSS	U
Illinois Test of Psycholinguistic Abilities			U	
Kuhlman-Anderson Intelligence Tests			U	
Lorge-Thorndike Intelligence Tests		U		
Leiter International Performance Scale		UR	UUU	UUUU
Metropolitan Reading Readiness	P	U		
Ontario Performance Test		U		
Otis Quick-Scoring Mental Ability Test		C	U	
Ontario Test of Mental Ability			SS	
Peabody Picture Test			U	
Primary Mental Ability Tests		U		
Raven Progressive Matrices			S	
Stanford Achievement Tests		R	RS	U
Stanford Binet Tests			UP	U
Revised Stanford-Binet Form L				C
Stanford Reading Test		U	U	
Templin-Darley Tests of Articulation	P			
Vorow-Rogers Achievement Test			S	
Wechsler Intelligence Scale for Children (WISC)		UU	UUUUP	C
WISC Performance		S	UURS	U
WISC Verbal	R			
Wechsler Adult Intelligence Scale (WAIS)			US	

One symbol indicates one respondent.
U - United States Day School
R - United States Residential School
C - Canadian Day School
P - Private School
S - Canadian Residential School

Curricula for the Partially Hearing

The final question on Questionnaire B for Schools dealt with curricula especially designed for partially hearing children. A few of the respondents did not reply to this section but the majority did and a summary of schools with and without such a curriculum appears in Table XX. Only a few indicated who was responsible for the development of the curriculum for the partially hearing. Three of those who did indicated that supervisory staff and teachers were responsible. Three stated that they were following adaptations of the Clarke School curriculum. Three others made the comment that their children integrate with hearing pupils.

Table XX Numbers of Schools Having Special Curricula for the Partially Hearing

Class of School	Special Curriculum for Partially Hearing	No Special Curriculum for Partially Hearing
*U.S. Day Schools	7	15
U.S. Res. Schools	1	5
Private Day Schools	2	
Can. Day Schools	1	2
Can. Res. Schools		5

*Four schools were in the process of developing a curriculum.

CHAPTER IV

DISCUSSION

The results of the two studies, the literature review and the questionnaire survey, are so interrelated that it was decided not to attempt to discuss them separately. As was noted earlier no tabulation was made of results for the literature review. The only suitable form of reporting for this kind of study appeared to be an annotated bibliography of readings and this would seem to have little value since publications such as dsh abstracts are doing this kind of thing regularly in a much more adequate way. Therefore, the following is an examination of the responses to the points covered by the questionnaires as well as a relating of the results to information and points of view reported in recent literature.

Questionnaire Returns

Auer[1] has indicated that a 48 percent return is good for a mailed questionnaire survey under ordinary circumstances with 70 percent being good for questionnaires mailed out under official sponsorship. The questionnaires used in this study were sent out with covering letters explaining

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[1]Jeffery J. Auer. An Introduction to Research in Speech, New York: Harper & Brothers, 1959, 161.

that the information was being sought to help with the development of a curriculum for partially hearing children which was being developed by the Department of Special Education Services of the Calgary School Board under the guidance of its superintendent, Dr. C. Safran. This along with the author's mailing the questionnaires in his capacity as assistant principal of the James Short School in Calgary undoubtedly helped to give this survey official status.

The total return of 82% from departments of education and 73% from schools compares very favorably with Auer's estimate of a good return. However, if one considers only those questionnaires which were completed fully enough to be used in the tabulation, the percent return drops to 66 and 53 respectively. These are much higher than Auer's estimate of a good return under ordinary circumstances but falls short of his official survey standards.

Since Auer did not make a distinction between total returns and usable returns this would likely be considered a very good return according to his standards.

The author recognizes that the questionnaires were lengthy so the time involved would prevent some recipients from completing them. In fact, several written comments and letters indicated that this was so. These replies also indicated that questionnaires were not completed because

information was requested in a form which was not readily available. In addition, some respondents indicated that their schools were closed for the summer or for some other reason staff was not available to make completion of the questionnaires possible.

However, the author felt the spirit of cooperation was very high and the assistance received through completed questionnaires, printed materials and personal letters was much more than might reasonably have been expected.

In interpreting the tabulation of results Auer's[2] caution that the high interest of those who responded may tend to make their responses somewhat different from those who did not respond probably should be considered. Gee[3] quoted authors who claimed that anywhere from a 10 to 70 percent returns for questionnaires is good and noted that short questionnaires are more apt to be answered. Considering the length of the questionnaires used in this study, the returns on this basis would appear to be very good. However, Madge[4] pointed out that although a 70 percent return of questionnaires has often been accepted as reasonably

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[2]Jeffery J. Auer, An Introduction to Research in Speech, New York: Harper & Brothers, 1959, 161.

[3]Wilson Gee, Social Science Research Methods, New York: Appleton-Century Crofts, Inc. 1950, 316.

[4]John Madge, The Tools of Social Science, London, New York, Toronto: Longmans, Green and Co., 1953, 248.

satisfactory even this return may be an insecure basis for making gneralizations especially if non-respondents are likely to differ in important aspects from the respondents. This, plus the fact that information was obtained from only a very few of the total number of schools in the United States and Canada which offer programs for the partially hearing, should make the reader wary of assuming that a comprehensive overview of programs of language instruction for the partially hearing was indeed achieved.

This caution is tempered by the fact that care was taken to word the questionnaires carefully enough so that only factual information would be elicited for the most part. Where subjective judgements were asked for these were clearly indicated as such and were treated as opinion. Therefore, it is assumed that a minimum of bias is involved and it should not have differentiated the non-respondents from the respondents.

Public Responsibility for Educating the Hearing Handicapped

Although a few states and provinces do not have laws which compel children with a hearing handicap to attend school the majority do, and it is logical to assume that where compulsory attendance laws are in effect the department of education has taken steps to see that educational facilities are provided for children of compulsory attendance age. This does not always imply the provision of special classes or schools

within the state or province. Sometimes a state or provincial education department will make arrangements to have certain pupils trained by a school or school system in another state or province, while Nova Scotia and New Brunswick operate a joint school to serve both provinces. Some state and provincial laws provide financial assistance to local school systems which wish to make arrangements with other systems to educate their children who have special handicaps such as hearing losses.

Since the hearing handicapped children of any school system make up only a very small proportion of the total school population* the wisdom of small school systems' negotiating with large neighbouring systems or centralized schools to train their hearing impaired children is readily apparent for both financial and staffing reasons. In Alberta, where the author works, there has been a tendency for families who have hearing handicapped children to move to the larger centers, Edmonton and Calgary, so they will reside within school districts where the special needs of their children can be more fully met.

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*Reed[5] reported in 1967 that inner London in England had 483 hearing handicapped pupils of a total school population of 410,216. This is an average of only slightly more than one hearing handicapped child per thousand pupils. This is in keeping with Johnson's estimate in 1962.[6]

[5] Proceedings of International Conference on Oral Education of the Deaf, Washington: The Volta Bureau 1967, 53.

[6] J. C. Johnson, Educating Hearing Impaired Children in Ordinary Schools, Manchester: Manchester University Press, 1962, 18.

Early Training for the Hearing Handicapped

The foregoing suggests that the training and education of hearing handicapped children is rather generally accepted as an important public responsibility. However, there is no evidence in state attendance laws to suggest that early training for the hearing impaired is considered vital. In fact, only eight of the 30 states and one of the seven provinces which reported having compulsory attendance laws require training under the age of six years, while seven of these states and two of the provinces do not compel their children to attend until they are seven. Although the questionnaires did not ask about compulsory attendance for regular pupils these figures would lead one to suspect that in most states and provinces compulsory attendance is the same for both hearing and hearing handicapped children with no special consideration being given to a need for earlier training for the latter group. This is by no means universal because four states did report having compulsory attendance for five-year-olds and another four require schooling for their hearing handicapped at even earlier ages. Two of these make it a definite four years whereas the other two, perhaps recognizing the difficulty of definite assessments among infants, were reported as requiring training to begin at three or even younger. Thus it appears that in some states an early start is mandatory.

The ages at which public financial assistance is available

should also indicate the value placed upon early education of children with hearing problems. Here there seems to be much more acceptance of the idea that early education has merit. Sixteen of 31 state and three of nine provincial departments of education are reportedly spending public funds on the education of hearing handicapped children of three years of age or younger, while only six state and three provincial departments were reported to begin financial assistance at age six.

Of course, the availability of funds is of no value unless these monies are translated into action. A study of the replies from schools would indicate that most pupils in the residential schools have not received the benefit to be derived from early training and education. Four of the six residential school respondents checked the 1 to 25% category as their estimate of the percent of their partially hearing pupils who have preschool training, probably meaning before age five years. The day schools tended to report larger percentages of children as having had preschool training but still 13 of 31 schools gave estimates falling into the 1 to 25% category. Another three claimed to have no pupils with preschool training and five did not indicate how many preschool-trained pupils they had. This leaves only ten day schools reported as having more than 25% of their pupils trained early. Of course, it may be argued that several of these schools have programs which start at age three years. Therefore, they have, in effect, preschool training programs

and the above percentages are somewhat misleading.

The author is aware that preschool was not defined on the questionnaire. This was purposely omitted because it is a relative kind of term and it was assumed that more information might be gained by relating the preschool training reported by a school to the beginning age of its pupils. An interested reader is referred to the tables on pages 52, 53, and 54 for details of preschool training percentages. It will be noted that over 50% of Canadian residential and day schools have fewer than 26% preschool-trained pupils and their entrance ages tend to be higher.

Regardless of one's interpretation of preschool training the actual percentage of pupils who are receiving such help would appear to be much too low. If there are any areas in which there is nearly universal agreement in the literature about teaching the hearing handicapped one of them is certainly the urgent need for very early training. This has been recognized by some educators for many years. In the seventeenth century, Bacon believed that "those who commence learning late do not learn as well as those who begin early"[7] Miss Whetnall, in England, and Dr. E.H. Huizing in Holland set up programs for training of hearing handicapped infants in the early 1940's.[8]

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[7]Louis M. DeCarlo, The Deaf. Englewood Cliffs, N.J.: Prentice Hall, Inc., 1964, 18.

[8]Ciwa Griffiths, Conquering Childhood Deafness. New York: Exposition Press Inc., 1967, 14.

The literature of the past decade is full of theoretical discussion and experimental evidence to support this position. Stone[9], Stewart, Pollock and Downs[10], Rushford and Lowell[11], and Elliott and Armbruster[12] are among those who have stressed this point recently.

This stress on early training is based upon observations about the language and speech development of normal children. It is sometimes admitted that we do not know how this basic communication skill is achieved[13] but it is clearly observable that the process starts in very early infancy and is well advanced by age two years in most cases. Our Headstart programs are a testimony to the importance of not neglecting this early period of development even with hearing children so why should it be any less important for the hearing handicapped?[14] There is a growing conviction that if this early period of language and speech development is neglected the task of learning to communicate adequately becomes very difficult, if not impossible. Thus preschool training would appear necessary much before age three years.

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[9]Alice V. Stone, Oral education - a challenge and a necessity. Volta Review, 70, 1968, 289-292.

[10]J. L. Stewart, Doreen Pollack, and Marion P. Downs, A unisensory program for the limited hearing child. ASHA 6,1964,151-154.

[11]G. Rushford, and E.L. Lowell, Use of hearing aids by young children. JSHR, 3, 1960, 354-360.

[12]Lois L. Elliott, & Virginia B.Armbruster. Some possible effects of the delay of early treatment of deafness. JSHR, 10, 1967, 209-224.

[13]Dorothy Bell, Communication problems in preschool children [illegible] 3, 241-245.

[illegible]ott, Head start program - implications [illegible]lta Review, 70, 1968, 106-113.

The Vital Role of the Parents

This acceptance of the need for the best by way of early training leads to another basic assumption. At least one of a hearing handicapped child's parents, and preferably both, should do all they can to develop an understanding of their child's needs - his normal ones, because he is first and foremost a child, and the special ways in which some of these normal needs must be met because he has a sensory deficiency. This role of parents is also receiving much attention in the literature, often merely by brief statements of fact and sometimes by description of ways in which parents are helped to discharge this responsibility.[15]

This writer feels that so far inssuficient emphasis has been placed upon the value of this role to the parents, once it has been defined and accepted. Probably no one except the parent of a handicapped child can know what it is like to learn that one's child has a serious mental or physical deficiency. It is inevitable that parents, who love their child at all and who are the least bit sensitive to his needs as a child and later as an adult, are going to be shocked by the knowledge that normal development is going to be much more difficult for their son or daughter than it is for most children. The word "shocked" is used because it more

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15 Kathryn Barth Horton, Home demonstration teaching for parents of very young deaf children. Volta Review, 70, 1968, 97-104.

aptly implies the confusion of emotions which accompany such a realization. Such feelings as sadness, pity, fear, apprehensiveness, guilt, and panic, are some of those which may be named and perhaps one or other may at times dominate but it is usually a mixture of many unhappy emotions which prevails.

Action seems to be one of the best ways to alleviate, or at least control, the shock of having a handicapped child, and the value of giving parents something of obvious worth to do to ease the burden of the handicap for their child and themselves should not be under estimated. In fact, it has been the author's experience to see parents grow as a result of their work with their child, and incidentally, with parents of other handicapped children, so they have actually come to a fuller and richer self-realization and eventually have come to live happier lives themselves. This is contrary to what is at first expected but sometimes it can be the case. It is not suggested that this is the rule, however, and to many the acceptance of one's role as parents of a handicapped child is limited to a more normal development of the child and a better understanding and acceptance of his handicap by his parents.

How the parents can best be educated to play their vital role is uncertain and like many questions involving a value judgement it probably has no "best" answer which can be

selected from the number of possibilities. Some communities are providing institutes for parents of hearing handicapped children.[16] Others insist upon parent participation in preschool training programs.[17] Correspondence courses provided by the John Tracy Clinic are invaluable for some parents and others can gain much from reading articles on the subject of early training of the deaf and partially hearing.

Personally, the author is biased in favor of having a strong parents' group, with as many professional people involved as possible, as a part of the parent education program of any community. This can take one of several forms, International Parents' Organization of the Alexander Graham Bell Association, a chapter of the Council for Exceptional Children, some kind of parent-school organization, or an entirely unaffiliated group. The main thing is parent involvement to help parents get away from a feeling of isolation and to help them keep growing in understanding of their changing role as parents. As their child grows, as time moves on, the child's needs change, and society's expectations of the child changes and so the parent's role must change.

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[16] June Miller, Institute for parents and their deaf children. Volta Review, 66, 1964, 185-197.

[17] Grace M. Harris; Language for the Preschool Deaf Child, New York: Grune & Stratton, Inc. 1963, 238.

Another important facet of parent growth and participation is presented later under the discussion of the value of the teacher in the language development of hearing handicapped children. Dr. Helen Schick Lane, as President of the Alexander Graham Bell Association for the Deaf, remarked, in speaking to parents, "You are needed as part of the team until your 'child' becomes a member of ODAS![18] ODAS is the Oral Deaf Adult Section of the Alexander Graham Bell Association.

Early Assessment of Hearing Losses.

All of the foregoing discussion about early training and the vital part that parents have to play in it is quite pointless if very early diagnoses of hearing losses are not being made regularly. Too often, in the past, serious attempts to assess the degree of hearing loss, were left until the child was four or five years of age or later. This is not so prevalent today but there does not appear to be any general effort being made to assure that hearing problems are picked up in early infancy. This is not specifically an educational problem. Initially it is a medical concern with educational implications so there is a need here, as well as throughout the child's educational career, for a close working relationship to exist between medical personnel and educators concerned with the hearing handicapped.

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[18]Helen Schick Lane, What is our aspiration level for deaf persons? Volta Review, 70, 1968, 608-614.

Occasionally, we read about centers where efforts are being made to identify as many as possible of the babies with hearing losses before they reach one year of age.[19] Fairly frequently reference is made to the belief that this can be done quite accurately with most infants.[20] Regardless of how many limitations there are to the total effectiveness of a program for screening for hearing loss, it would appear desirable to diagnose hearing losses as early as possible so that parent and child training may get under way without unnecessary delay. If there is no full scale screening of infants for hearing impairment in a community large enough to have medical services, then the parents and educators of the hearing handicapped should be asking why and taking action to see that this situation is remedied.

The Place of Amplification and Auditory Training.

A discussion of early training, or early language development, for hearing handicapped children would appear to be incomplete without reference to auditory training. As far as can be ascertained by an examination of recent literature there is almost as universal an agreement about the

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[19]Thomas J. Watson, The Education of Hearing Handicapped Children. London: University of London Press Ltd.,1967, 49.

[20]Marion P. Downs, Identification and training of the deaf child-birth to one year. Volta Review, 70, 1968, 154-158.

need for early auditory training as there is for early attention to language development and other aspects of a child's early growth. There is disagreement as to what may reasonably be expected from auditory training[21] but few, if any, educators today would claim that early auditory training is undesirable.

Advocates of the early use of residual hearing usually stress the need for the use of amplification because it appears to be generally agreed that the normal acquisition of language is dependent upon the auditory sense. Many who stress auditory training believe that only traces of residual hearing can be "trained" to be of some use in the development of more normal language and speech patterns.

The theoretical acceptance of amplification as of worth in early language training of both the deaf and partially hearing is undoubtedly supported by work being done which shows the value of lower formants of our speech sounds in auditory discrimination.[22] It has been demonstrated that amplification downwards to 50 or 100 cycles per second can make many speech sounds significantly more audible for many

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[21] Ira J. Hirsh, The ears of the deaf unstopped. Volta Review, 68, 1966, 623-633.

[22] Janet Jeffers, Formants and the auditory training of deaf children. Volta Review 6, 1966, 418-423.

hearing handicapped.[23] Typically, individual hearing aids have neglected frequencies below 300 c.p.s. and often below 400 c.p.s.

Also, the number of children who are obviously making good use of amplification even with very defective hearing as shown on audiograms,[24] make it difficult to ignore the possibility of amplification being useful to all children who have any residual hearing, and the claims that only a small fraction of the so-called deaf do not have residual hearing[25] would suggest that to try amplification is almost a must.

Coupled with this acceptance of the belief that auditory training and amplification is very desirable is a growing conviction that there should be constant use of amplification.[26] The normally hearing child hears all the time. The hearing impaired child, therefore, should hear as much as he can, at least all of his waking hours, and there is some suggestion that this be extended to sleep periods as well. Implied here is the belief that hearing is

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[23]Doris Leckie, and Daniel Ling, Audibility with hearing aids having low frequency characteristics. Volta Review, 70, 1968, 82-86.

[24]Sir Alexander Ewing, and Lady Ethel C. Ewing, Teaching Deaf Children to Talk. Washington: Volta Bureau, 1964, 162-178.

[25]T.J. Watson, The use of residual hearing in the education of deaf children. Volta Review, 63, 1961, 328-334.

[26]Doreen Pollack, Acoupedics: A uni-sensary approach to auditory training. Volta Review, 66, 1964, 400-408.

vital to the optimum total development of the child and his sense of well being. Our concern should not be limited to the growth of language and speech.

Just as there is no clear agreement about the consistency with which amplification is needed there is no general agreement about combining an auditory approach with other sensory clues in language and speech training. Some successful educators advocate a unisensory auditory approach,[28] arguing that visual and tactile senses tend to distract the "listener" because they are stronger than the auditory sense in the case of the hearing handicapped. They hypothesize that with the normally hearing the reverse is true.

Other effective educators feel that at least the visual sense must be used to supplement the auditory sense to fill in any gaps caused by sounds and words which cannot be heard.[29] Some attention is paid to the tactile sense also.[30] It is argued that the hearing handicapped have to rely to some extent on feel to form some speech sounds and the tactile

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[28]Erik Wedenberg, Experience from 30 years auditory training. Volta Review, 69, 1967, 588-594.

[29]Boris V. Morkovin, Thought patterns of deaf children. Volta Review, 66, 1964, 491-494.

[30]Peter J. Owlsley, Education of hearing impaired children in Europe. Volta Review, 68, 1966, 655-659.

sense can assist in developing rhythm and intonation. At this point in time, our knowledge being limited as it always will be, it will have to remain with educators to decide whether a unisensory of multisensory approach best meets the needs of their hearing handicapped pupils. It is entirely likely that the truest answer is that the "best" method will vary somewhat from child to child and that, regardless of theory and practice, all senses will come into play in the language and speech development of any child.

Use of Amplification in Schools.

The importance attached to the use of amplification is reflected in its use in schools. Replies from the departments of education indicate most hearing handicapped pupils in most of the represented states and provinces use amplification a large portion of the time with the partially hearing making more use of hearing aids, in the broad sense of all amplifiers used by the hearing handicapped, than the profoundly deaf. This would appear to be consistent with the reports on use of amplification received from schools re the children with less than 80 dB losses. The use of amplification by children with greater losses was omitted from the questionnaire so no information was obtained for this group. It is to be noted that day school pupils reportedly tended to be making more use of amplification

than residential school pupils. It will be interesting to see if there will be more universal full time use of amplification ten or fifteen years from now when the present programs, stressing consistent, maximum use of amplification from early infancy, have had a chance to demonstrate their effects upon the communication abilities as well as the social and vocational adjustments of the hearing handicapped who have come up through such programs.

In spite of a far from universal use of amplification reported on the questionnaire returns, it is to be noted that most respondents felt that hearing aids should be worn all of the child's waking hours for optimum benefit to be derived therefrom.

The number of school respondents who indicated preference for an induction loop system with individual hearing aids over all other types of amplification, 13 out of 25, is in keeping with the view being expressed recently that hearing should be consistent. Induction loop and radio frequency type amplifiers do provide this consistency while having the advantages of better pickup for classroom work, especially with the teacher being constantly near a microphone. The aids worn by the children may be worn in the classroom and out thus eliminating the need for changing instruments. This possibility for consistency might well be considered when setting up classrooms with auditory

training equipment.

The philosophy behind much of this emphasis on the early training of hearing handicapped children, making maximum use of parents and the wearing of hearing aids, may be a reflection of an attitude expressed by a doctor in handing out a prescription: "Take these. It will be a day or two before the lab tests are back but if you have what I think you have these will definitely help. If you have something else, they will do no harm."

Public Assistance Beyond School Age.

The upper age limits for compulsory attendance and public assistance as they relate to the education and training of the hearing handicapped show some interesting trends. Most of the states and provinces from which reports were received appear to provide funds for training of older students over the same age ranges as would apply to hearing persons but two of these states and one of these provinces have no upper limits. One state provides employment security and another requires students to stay in school until high school graduation, job placement, marriage or age 31. These facts would suggest that in some states, at least, it is recognized that the hearing handicapped of all ages do have special needs. This is further suggested by the fact that 23 states and all nine provinces were reported to provide more

money for the education of a hearing handicapped child than is provided for the average hearing child.

Most departments of education appear to leave a large part of the general administration and financing of programs up to local school authorities and other local organizations but a few state and provincial education departments were reported to be largely controlling the operation of their education programs for the hearing handicapped. This situation would appear to exist in most cases where these programs are centered in a state or provincial residential school. However, nearly two thirds of the states and provinces represented in the reports were said to maintain full control of teacher qualifications at the state or provincial department level. While this control probably exists for most teachers, this top level control may, in some cases, indicate a concern that the hearing handicapped be taught by properly trained personnel.

Residential "versus" Day Schools.

Although The American Annals of the Deaf annually publishes statistics on schools which teach the hearing handicapped, including such things as the number of day and residential pupils in each school, it was felt that additional information about the pupils would help with the understanding of the total educational setting prevailing in each

state or province. It was difficult to devise questions which could be answered easily and still give the kind of general overview which was desired. Perhaps it was partly because of the cumbersome nature of this part of the questionnaire that many respondents from state departments of education chose not to attempt to reply to it and others provided only part of the desired information. Nevertheless, it was learned that in the states represented in the replies relatively few of the partially hearing but proportionately more of the profoundly deaf are in residential schools. In Canada, according to the replies which were received from departments of education, there is a tendency for most profoundly deaf and partially hearing children to be educated in residential settings.

It was impossible, from the replies received from schools, to determine how many partially hearing children were being educated in the residential schools of the United States and Canada. With the exception of one school from each country, either all of the pupils were listed as partially hearing or no attempt was made to designate the number of partially hearing in the school.

This may reflect the present state of confusion which exists with regard to determining who is profoundly deaf and who has trainable hearing or it may indicate a trend to treat pupils as partially hearing until they have

demonstrated conclusively that they will never make use of their auditory sense. Whether or not the latter assumption is the case, according to a belief that we should take this position regarding the education of the hearing handicapped,[31] there are undoubtedly many partially hearing children in residential schools.

This brings a discussion of residential schools well within the scope of the present study and involves us in the now old controversy over which is the best setting for the academic, social and vocational growth of the hearing handicapped.

Earlier mention was made of the decrease in total number of residential programs for hearing handicapped children in the United States from 1959 to 1967 while the number of day programs for this group had nearly doubled over the same period. Of even greater significance is the change in the proportionate number of pupils being taught in these two types of situations. In 1959, 16,523 pupils were in residential settings and 8,792 pupils were receiving their education in day programs.[32] Thus the ratio of residential pupils to day pupils was nearly 2 to 1. In 1967 this ratio

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[31] Ira J. Hirsh, The ears of the deaf unstopped. Volta Review, 68, 1966, 623-633.

[32] The American Annals of the Deaf, January, 1959, p. 154.

became approximately 5 to 4 with 19,400 pupils in residential schools and 15,804 in day programs.[33]

Similar comparisons cannot be made for Canada because the American Annals in 1959 did not distinguish between day programs and residential programs and the names of schools do not always indicate whether they are residential or day schools or both. Also, the author is aware of several day programs for the partially hearing which were not listed at this time. A more complete listing was given in 1967 but at least one important day program was omitted and again no distinction was made between residential and day pupils.

The author did not find information which would show these comparisons for Great Britain as a whole, but Michael Reed[34] reported that in 1967 there were actually more hearing handicapped pupils in units for partially hearing than there were in schools for the deaf in London, 255 as compared with 228. In 1960 there were only 106 in these units while there were 258 in schools for the deaf. The rate at which units for the partially hearing are being set up in other parts of Great Britain would indicate a growing conviction that day programs are desirable. In 1964, there

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[33] The Directory of Services for the Deaf in the United States, The American Annals of the Deaf, May, 1967, p. 484.

[34] Michael Reed, Proceedings I.C.O.E.D., 64.

were 127 classes for partially hearing children in Great Britain educating over 30% of the total partially hearing school population.[35]

The statistics for the United States certainly indicate a growing popularity for the day school programs but popularity, alone, is unsafe ground upon which to determine worth. This acceptance of day school programs is based very largely on the premise that as much integration as possible should be available to the deaf as well as the partially hearing. The opponents tend to take a "yes-but" attitude, admitting that integration has merits but the residential school provides the best setting for the full development of a severely hearing handicapped child's potential. Quigley and Frisna failed to show that residential schools have any detrimental effect and students tend to be better adjusted in these schools.[36] There are some educators now who express distress over this either-or attitude toward residential and day programs. They tend to be proponents of integration, hence day school programs, but recognize a need for residential schools for children who, for emotional reasons, lack of parent support, or

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[35]Thomas J. Watson, The Education of Hearing Handicapped Children, London: University of London Press Limited, 1967 16-17.

[36]Stephen P. Quigley and Robert D. Frisna, Institutionalization and psycho-educational development of deaf children. CEC Research Monograph, Series A, No. 3, 1961.

inability to learn to communicate with the hearing, seemingly are not suited for integration or are actually harmed by it.[37] This point of view implies a modified role for the residential schools.

It is the author's conviction, from his reading and experience, that there is a need for residential schools in spite of the growing demand for day schools. Even if they were definitely detrimental they should be maintained while a phasing out process were undertaken, but the picture is by no means as gloomy as that. They are important in providing parents and educators with a choice of setting when all of the ramifications of integration are by no means clear. The use of manual communication is also a part of the consideration as is the question of realistic goals for the deaf. Then there is also the distinct possibility that residential settings may be desirable for some of our multiply handicapped children.

It is likely that few partially hearing children should be educated in residential schools because of the segregation involved and the limited opportunities to share in the wealth of experiences provided by normal home, community and school environments. However, it is easy to

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[37] D.M.C. Dale, Units for deaf children. Volta Review, 68, 1966, 496-499.

imagine that there can be partially hearing children, who have such poor home environments that a residential setting actually would be an improvement, even if it tended to make them functionally deaf.

The residential school should exist basically for the educationally deaf, in this writer's opinion, taking into full consideration the difficulty involved in determining who falls into this category. The emphasis on training of infants and their parents may come to be very important in selecting those who should or should not attend a residential school. Also, it is conceivable that in the future pupils typically will not be enrolled in residential schools until they are older than is now the practice. A child should not be treated as educationally deaf until it has been demonstrated over a long period of time that he does not respond satisfactorily to auditory training and is not developing good functional oral communication.

Here the author again takes the liberty of stepping a bit beyond the scope of his study by suggesting that school authorities might well be advised to weigh very carefully the need for a residential school before deciding to build a new one. With what appears to be a decreasing need for the residential school setting there may be merit in negotiating with a neighboring residential school to provide for those children whose development would indicate that

such schooling is desirable for them.

The Value of Integration

Very closely associated with most evaluations of day school programs is the importance of integration. To be fully meaningful, integration has to be considered in a broad sense to include more than just opportunities for children who have handicaps to work academically with normal children. It should imply normal or near normal association with hearing people in all kinds of situations - on the playground, in organized sports and other recreational activities, in clubs, and informally in the home, on the street, in stores and wherever else people are found. Coupled with this interaction with people are opportunities to interact in an infinite variety of ways with the total environment. Thomas, in describing Seattle programs for the deaf and severely hard of hearing points out that both groups are kept in schools for hearing children because of the need for as nearly normal environment as possible.[38]

For the hearing handicapped these rich experiences provide the motivation for the continued use of verbal communication and the opportunities to practice the speech which

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[38]Donald Thomas, Programming for the deaf and hard of hearing. Volta Review, 66, 1964, 436-438.

has been developing.[39] In theory this would appear to be a sound assumption and there is evidence now among young deaf people who have had the benefit of thorough early training with parental assistance and auditory training that this is indeed so. Members of ODAS will loudly testify to its truth. With the more extensive use being made of opportunities to work with our hearing handicapped infants, the extent to which integration is beneficial may become very much clearer a decade or so from now.

The question of integration is one in which the author is so intimately involved that he can scarcely avoid an emotional bias. However, there is so much evidence to support the worth of integration that it verges on definite negligence not to give the partially hearing, and probably most of the deaf, every opportunity to associate with hearing children. He would certainly support the growing trend in England to teach the partially hearing in units attached to ordinary schools[40] and would even go so far as to say the New Zealand practice of attaching a class for the deaf to a small class of normally hearing is very desirable.[41]

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[39]Jeri Engh, They can't hear. Volta Review, 69, 1967, 268-272.

[40]Thomas J. Watson, The Education of Hearing Handicapped Children, London: University of London Press Limited, 1967, 16-17.

[41]D. M. C. Dale, Units for deaf children. Volta Review, 68, 1966, 496-499.

The questionnaire replies indicated that, while some of both the partially hearing and deaf groups are educated in classes containing both deaf and partially hearing this is not done typically whereas, in the United States, at least a fairly large percent of partially hearing are taught in classes with hearing children. Only one respondent from a Canadian department of education indicated that a large portion of the partially hearing are taught with hearing children and then this applied to only those above 14 years of age. This tendency for the partially hearing to be educated with hearing children is very much in keeping with the philosophy being expressed by a number of writers today and with the results of some research projects. Johnson[42] found that partially hearing children taught in ordinary schools in England had near normal facility in spoken language and became proficient lip readers without formal training. He also described the special units for the partially hearing which are attached to ordinary schools in England and Wales where integration is a definite part of the program. Even in these units, he found that the partially hearing were not progressing as well in reading and arithmetic as children with comparable handicaps who were being taught in ordinary schools. The Ewings[43] suggest

[42] J. C. Johnson, Educating Hearing Impaired Children in Ordinary Schools.

[43] Irene R. Ewing and Alex W.S. Ewing, New Opportunities for Deaf Children. London: University of London Press Ltd., 1958, 139.

also that the partially hearing can benefit from being a part of a school where normal patterns of behavior and speech prevail.

Some other investigators have not obtained results from their research which so strongly favor integration or education of partially hearing with hearing children. Kodman[44] found that a group of 100 partially hearing children who were being educated in Kentucky public schools were definitely inferior to hearing children on standardized achievement tests. Also Motto and Wawrzaszek[45] felt that there is insufficient evidence to support the hypothesis that better communication skills are acquired by integration. In addition they reached the conclusion that the hearing handicapped are not so well accepted socially as hearing children when they are educated in regular classes. However, they were not prepared to say that even severely hearing handicapped persons should not be educated with hearing people because other than academic advantages might well accrue from integration.

The writer acknowledges that there is evidence that integration may not be as desirable as many of its proponents think, but the weight of evidence of its worth would

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[44]Frank Kodman, Jr., Education status of hard-of-hearing children in the classroom. Journal of Speech and Hearing Research, 28, 1963, 297-299.

[45]Joseph Motto and Frank J. Wawrzaszek, Integration of the hearing handicapped: Evaluation of the current status. Volta Review, 65, 1963, 124-129.

suggest that it has not been integration itself which has failed in most cases. It has been the manner in which it has been handled. Criticism has been most frequently levied at the academic aspects of integration and here great care must be taken to make the hearing handicapped child and his receiving teacher and class ready before actual integration is attempted. Again readiness involves many factors. The child must have sufficient oral language facility to gain enough information from the oral environment of the regular class to make his experience profitable. He must be emotionally ready to withstand the stress of a more difficult learning environment and the receiving teacher and class must be prepared to accept him as a child, not as a handicapped pupil, before actual integration is attempted.

In rating various class settings as best for partially hearing children, 16 of 22 respondents from U.S. day schools considered integration with hearing children as best. A careful examination of results show a discrepancy in numbers so this may not be strictly correct. A few schools indicated two settings as best. Canadian day school respondents also showed a high preference for integration with hearing children with residential schools being shown as having a lower preference for this kind of setting. The number of schools represented is small but this may show some of the differences in philosophy existing between

supporters of these two kinds of programs, especially when it is remembered that the reference here is to partially hearing not deaf children.

Oralism "versus" Manualism

Closely associated with the controversies over residential and day schools and integration is philosophical conflict between oralists and manualists. There has been a tendency to associate oralism with day school programs and manualism with residential schools but this never has been a strictly fair generalization although there has been a tendency for the residential schools to be more accepting of non oral communication than day schools are. The majority of residential schools have been officially oral for many years but, according to some observers, have remained strongholds for manualism because this is the natural means of communication for the students outside the classroom.[46]

It should not be surprising that this is the case. Furth[47] has also shown that the hearing handicapped have distinct verbal language deficiencies. In residential schools most of their interpersonal contacts are with other language handicapped persons. Since manualism is the most

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[46]Herbert R. Kohl, Language and Education of the Deaf, New York: Center for Urban Education, 1966, 13.

[47]Hans G. Furth, Thinking Without Language. The Psychological Implication of Deafness. Toronto: Collier-MacMillan Canada, Ltd., 1966, 13-14.

convenient form of communication for them it is almost certain to be retained.

It has been the writer's experience that the greatest advocates of manualism are manualists, especially those who are severely hearing handicapped. Those who are not handicapped tend to argue, "Who should know better than the deaf which is the best way for them to communicate?" Again the former situation is not surprising. We all tend to prefer using those skills which we have mastered well and to avoid using those in which we feel inadequate, unless we are highly motivated to improve the latter. As for the deaf, by virtue of being deaf, knowing what is best for all hearing handicapped is sheer presumption. A deaf person, like anyone else, knows what makes him feel ill at ease at a given time with a given background of knowledge, attitudes and skills. He cannot know what it would be like to have other skills and other mental and emotional sets until they have been developed.

It is up to educators and parents to make the "best" choices for their hearing handicapped children just as they must for all children and what these "best" choices are to be depends upon the goals which are set for the child's development, the age at which his handicap is diagnosed, the understanding and skill of his parents, and the nature of his handicap.

Early training, integration, and the use of amplification are all directed toward making hearing handicapped children oral, and this is undoubtedly a highly desirable goal. However, with our present knowledge and skill, we will fail to achieve this goal for all of our hearing handicapped. Can we justify refusing to teach fingerspelling and signs to those who show meagre oral growth after a few years of oral training? Admittedly, manualism has its limitations as far as quick, precise expression of ideas is concerned and it tends to force those who have no choice but to use it into a kind of subculture for the deaf, but surely it is much better than no language at all! In all fairness, it must be said that fingerspelling and the language of signs is serving many deaf people well at the present time. It is just to be hoped that the need for it will diminish with the passage of time and the implimentation and constant use of our new educational techniques and those which are not yet developed.

Combined methods of instruction are receiving considerable attention in the literature with many educators claiming that the use of fingerspelling along with speaking has proven to be very useful in improving oral communication.[48]

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[48]Edward L. Scouten, The Rochester Method, and oral multisensory approach for instructing prelingual deaf children. American Annals of the Deaf, 112, 1967, 50-55.

One of the basic arguments seems to be that the use of manual or visible "speech" helps the learner to fill in gaps which are left by speech reading[49] and aural discrimination. In this way, a child with defective hearing receives complete words and phrases at all times which leads to better understanding and better production of fluent speech.

Many "pure oralists" will argue that reading[50] provides the key to "filling in the gaps" so there is no need for the undesirable use of signs. In the absence of conclusive evidence about the harmful effects of signs and the merits of reading it is probably best to treat this as Streng did and consider it a futile argument,[51] and conclude that the important thing is to be consistent in the educational methods used and be sensitive to poor language development with individual pupils and be prepared to make changes in an effort to help those who do not appear to profit from presently used techniques.

That oral methods of instruction are rather strongly favored by most school systems is indicated in the questionnaire replies but there is plenty of indication that

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[49]Hans G. Furth, Thinking Without Language. The Psychological Implication of Deafness. Toronto: Collier-MacMillan Canada, Ltd., 1966, 207.

[50]John K. Duffy, i/t/a/ and the hearing impaired child. Volta Review, 66, 1966, 150-153.

[51]Alice H. Streng, The swing of the pendulum. Volta Review, 69, 1967, 94-101.

other than oral methods are being used. Only about half of the department of education respondents indicated that the percentage of their younger profoundly deaf and partially hearing children who are being instructed by purely oral methods fall into the 75 to 100% category. Only about one fourth of the department respondents claimed that over 75% of their older deaf students receive basically oral instruction. It would appear that complete use of oral instruction tends to decrease with age for even partially hearing students.

A similar decline with age in the use of oral instruction appears in the reports from residential schools. It is not so clear a trend for day schools. Most respondents from both day schools and residential schools indicate that over 75% of their pupils receive basically oral instruction supported by reading and writing with fewer at the upper age levels. One can only guess what might have been reported, especially for the younger age group 2 to 8 years, if reading and writing had not been included in this item of the questionnaire. Few of the school respondents estimated that over 75% of their younger children were taught in this way.

There is little indication from the results that much use of a combined method is being made in day schools.

However, several of the residential schools were reported as using both manual and oral instruction. What kind of combination was involved, was, of course, not indicated because of the wording of these questionnaire items.

The Multiply-Handicapped

About half of the respondents from departments of education in both Canada and the United States indicated that at least a small proportion of their hearing handicapped children have other physical handicaps with a smaller percentage of the partially hearing than of the profoundly deaf being multiply-afflicted. Similar incidence of multiple handicaps were reported from the schools. There is also indication in the reports that fewer children are receiving help for a second handicap than incidence might indicate should be the case.

Considerable interest in second or third areas of physical involvement is being shown in some centers now.[52] Some educators are expressing alarm about the apparent lack of help for the multiply-handicapped, especially the hearing handicapped mentally retarded.[53] However, there is not too much clear direction given about the handling

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[52] McCay Vernon, Characteristics associated with post-rubella deaf children. Volta Review, 69, 1967, 176-185.

[53] Patrice M. Costello, The dead end kid. Volta Review, 68, 1966, 639-643.

of these children. But it is important that educators be sensitive to the possibilities of involvements other than hearing losses and steps should be taken to define them and make provision for each child's particular needs.

Selecting of Pupils for Programs for the Partially Hearing

From the responses to the questionnaires it is evident that many pupils are selected for enrollment in programs for the partially hearing largely on the basis of hearing assessments and otological examinations. These tended to be rated of higher preference by the respondents of most classes of schools. A notable exception is that one of the Canadian day school respondents placed failure to function well in classes for hearing children highest as a criterion for placement. This may indicate a concern to meet the individual child's needs rather than treat deafness per se.

With today's emphasis on early training and the availability of good hearing aids and a trend toward early fitting, it is becoming increasingly difficult to determine, on the basis of hearing alone, what a child's educational placement should be. Dr. Griffith's work with the HEAR Foundation points out how well many children can overcome a hearing deficiency.[54] This would suggest that we not

[54] Ciwa Griffiths, Conquering Childhood Deafness, New York: Exposition Press, 1967, Chp. VII.

become over anxious about placement and perhaps take Hirsh's recommendation that the deaf be treated as partially hearing at least for their earlier training because the dividing line between the partially hearing and the totally deaf is not very clear.[55]

In spite of much current reliance on audiometric tests and other hearing assessments it is important that we recognize other factors when selecting a program of education for a child. His present hearing and language status are probably most important in setting initial goals for him but his rate of achievement, his adjustment to his total environment and the presence or absence of other physical defects must be considered before any long term decisions are made. Also, the role he is finally to take in society should be a vital consideration.

Time Devoted to Instruction in Various School Subjects

"Only if he masters language, can the deaf child surmount his handicap and make full use of his potential. That this painstaking task is accomplished by only a very few should not discourage us."[56] This quotation from an article

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[55]Ira J. Hirsh, The ears of the deaf unstopped. Volta Review, 68, 1966, 623-633.

[56]Beatrice Ostern Hart. The language program at the Lexington School for the Deaf. Volta Review, 66, 1964, 468-473.

written by Hart appears to reflect the attitude of a majority of educators of the hearing handicapped. A glance at the replies to the section of the questionnaire dealing with instruction time will reveal that by far the greatest portion of the school day tends to be devoted directly to language or the language associated areas of auditory training, speech therapy and reading, even with older children.

However, educators like Hart are not advocating a direct language approach. There is a growing conviction that language is a by-product of meaningful, interesting experiences; rather than a subject to be learned or taught. Likewise, the work being done by the HEAR Foundation would suggest that "auditory training" and "speech therapy" may also be largely incidental learnings provided maximum use is made of amplification and a good learning environment is provided.

This is not offered as criticism of devoting instruction time to language in its various aspects because we have, and will continue to have, children in our classrooms who have serious language deficiencies and therefore much need for assistance. Furth's conclusion that language instruction in our schools is largely remedial[57] is worthy of consideration when we are designing language programs for the school aged hearing handicapped and assessing their worth.

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[57]Hans B. Furth, Thinking Without Language. The Psychological Implication of Deafness. Toronto: Collier-MacMillan Canada Ltd., 1966, 207.

If what he says is true, we may have to be satisfied with far from ideal results from any approach to language instruction.

Perhaps, we would teach just as much "language" and further the total development of our pupils more, if we were to devote more time to stimulating and challenging experiences in the other subject areas!

Educational Media Centers

The school use of audio-visual aids has been summarized in the Results chapter and there it can be noted that schools do make regular use of a variety of this type of educational media. During the past few years a number of centers have been set up across the United States for the widespread circulation of media which are considered useful in the field of special education.

It has been recognized that a teaching machine, a curriculum guide, a filmstrip projector, or any other instructional aid is only an aid and how it is utilized really determines its worth. How it is used is dependent very largely upon the classroom teacher, her facility with using the aid and her imagination in preparing a class for its use.

The use of the various educational media available was the center of attention of the Symposium on Research and Utilization of Educational Media for Teaching the Deaf held

in Lincoln, Nebraska in 1967. Many ideas were presented and discussed at this meeting of educators but it was generally agreed that educational media holds much promise for improving education of the hearing handicapped but it can be effective only if well used by competent teachers. The teacher becomes more important, not less important, with increased availability and use of educational media.[58]

Also stressed was the need for more clearly defining educational goals and the need for change.

Instructional Procedures - Frequency of Use and Evaluations

The frequency with which various instructional procedures are used in the schools covered by the questionnaire replies and the evaluations of the effectiveness of these techniques have been tabulated in Chapter III. There is little point in trying to summarize what is shown in these tables. It is hoped that interested readers will refer to the information given there and use it in relation to their own specific needs and concerns. The writer suggests that instructional procedures are largely a matter of individual preference but teachers do like to compare their preferences and tastes with those of others. From this point of view this section of the report should be helpful.

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[58]George Propp, Symposium discussion summary. American Annals Deaf, 112, 1967, 734-743.

Mental Testing for the Hearing Handicapped

Table XIX of Chapter III summarizes the responses to the section of Questionnaire B which sought information about tests which are used to assess the mental potential of partially hearing pupils. The most outstanding point to be made is that no test appears to have wide usage. This may well suggest that we, as yet, do not have very adequate tests for making such assessments. One would wonder, with a growing concern for the needs of the mentally retarded hearing handicapped, and fairly accurate assessments of ability being desirable for making decisions re mental retardation, if more efforts should not be made to perfect some generally acceptable mental tests for the deaf and partially hearing.

Curriculum Development

Few schools were reported as having special curricula for their partially hearing pupils and this would make one wonder whether a curriculum comes first or last in the scheme of things. This is probably dependent upon the goals of the program. If a program is merely a supportive measure to assist partially hearing children, who are being taught in regular classrooms, then a curriculum would have little value. If, on the other hand, the partially hearing are to be taught in special classes, with perhaps only

a little academic integration, the establishment of educational goals and a set of procedures for achieving these goals would appear to be desirable - hence a need for a curriculum. Where academic integration is a definite goal, it would appear logical that the curriculum for the hearing handicapped should closely parallel that of the classes in which integration is to take place to ease the transfer of a pupil from one type of class to the other.

Defining the Goals for the Education of the Hearing Handicapped

The establishment of rather clearly defined goals for the education of the hearing handicapped extending right on into adulthood would appear to be basic to the development and functioning of any program designed to meet their needs. Closely associated with the defining of goals is a need to recognize that change is ever with us modifying the needs of pupils and challenging their educators. In a sense, these are points which are beyond the scope of the study as previously outlined, but, on the other hand, a discussion of educational programs would be incomplete without some reference to them.

The author has been concerned thoughout this study that more discussion in the literature has not been devoted to the basic philosophical considerations behind the work which

is being carried in the various educational programs for the partially hearing and deaf. Others, too, appear to share this concern for fairly frequent reference is made to the establishment of goals, the need for change, and the worth of teachers, but little is done by way of attempting to elaborate upon these issues. Therefore, the author offers the balance of this section and the following two in the hope that they will stimulate the reader to give some serious thought to these broader aspects of educating the hearing handicapped.

There appears to be a growing feeling among some educators that our programs have failed to provide the best possible training and education for the hearing handicapped because they have not been sufficiently coordinated.[59] Preschool programs in many communities have been separate from elementary programs. High school programs sometimes function with minimal reference to what has been done at the elementary levels and college and vocational programs are even more divorced from those which have preceded them.

If this is a weakness, and the author agrees that it is, the acceptance of some responsibility for more advanced training of the hearing handicapped reported for some state

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[59]Donald R. Calvert, A guest editorial: The American Organization for Education of the Hearing Impaired. Volta Review, 70, 1968, 533-536.

and provincial departments of education is an encouraging sign and it is to be hoped that this is merely the beginning of a trend toward more and more emphasis on total preparation for life for people with hearing impairments.

Once again, the provision of funds and facilities is not enough. Appropriate goals must be established and these must be based upon the definition of the roles which the hearing handicapped are to play in our society. These must be expressed in realistic terms, in terms which are appropriate for any person living in an extremely complex, now global and perhaps, in a generation or so, inter-planetary society. Lisensky was concerned about defining an appropriate role for the hearing handicapped when he spoke to the 1966 Summer Meeting of the Alexander Graham Bell Association for the Deaf.[60] There does not appear to be much being said about this aspect of education for the hearing handicapped but without a clear idea of where we are trying to go it is indeed difficult to determine the best means of travel. Lisensky suggested "We must seek a consensus, a common definition of the role of the deaf child". This writer would not go that far if this means a consensus for a whole nation but if he is speaking of a consensus within a school unit it is vital. There should be

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[60]Robert P. Lisensky. The family and the deaf child. Volta Review, 68, 1966, 673-678.

similarities in goals across a nation but it is conceivable that regional and cultural differences would lead to variations in the roles available to the hearing handicapped.

Further we must somehow teach the hearing handicapped to realize that we all have marked limitations and that no one can cope to any depth with more than a small fraction of what is happening in our world - that we can be truly knowledgeable in only one or two major fields has to be an accepted fact for most of us. The writer has seen many indications that hearing handicapped persons feel inadequate in situations where they are really as able as most of their peers because they imagine that the hearing people know much more about everything than they do. Even as teen-agers, the author's hearing handicapped sons find it difficult to believe that there are many things that their parents really know very little or nothing about. They have on occasion said, in effect, "you don't want to tell us," when their father or mother has tried to explain that he or she does not know how a certain device operates, or the functions of a certain organization which has been mentioned in the news. Somehow, they must come to realize, just as everyone else must if they are going to adjust to living in this "complex" world, that they must assess their limitations and work out a pattern of living compatible with their total abilities, desires, and the environmental settings available to them.

The author subscribes to the idea that hearing handicapped children, like hearing children, should be given the broadest possible understanding of the world in which they live and be trained to use as adequately as possible communicative, social and basic vocational skills. But these should not be sought in the vain hope that we are opening up the whole world to our pupils. If we attempt to go too broad there is grave danger that nothing will be gained in sufficient depth and with sufficient permanence to provide any basic foundation upon which to live. Our goal should be to train our children, hearing handicapped or otherwise, toward the development of those skills they need to survive in the communities where they are likely to live and at the same time instil in them the desire to keep learning, to keep exploring, and to confidently seek changes which appear desirable to them, at the same time considering and respecting the rights and needs of others.

Is there not some merit in looking upon employment as a means of providing a livelihood, with the enrichment of life, the true fulfillment of one's personality, coming from activities outside of one's vocational field? It would appear to this writer that the great majority of tasks which must be performed today, even in this age of automation, are largely routine kinds of work which are not particularly challenging and rewarding in themselves once the initial

preparation hurdle has been scaled. Shouldn't we be training our hearing handicapped young people, and perhaps most young people, to realize that they should prepare themselves for a vocation which will give them a comfortable living and which is worthy of their best effort during their working hours but that it is their leisure hours which hold the greatest potential for the living of a rich and gratifying life? The very increase in leisure which is brought about by ever shorter working weeks would indicate that more emphasis is needed upon preparation for the use of leisure time.

Theodore Blake,[61] a deaf student, points out the value of hobbies in making friends. He lists interests in collections, astronomy and photography as the door to many friendships which, it is implied, makes his life more satisfying. He also mentions books as being his "best friends".

Reaction to Change

The second major problem which this writer believes has received too little attention is the emotional reaction of teachers and other educators to change. It is difficult to conceive of an educator who does not, at times feel quite

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[61] Theodore Blake, Friends and hobbies. Volta Review, 69, 1967, 264-265.

inadequate to cope with the challenges which confront him. There is far more by way of methodology, philosophy and media to know about, to evaluate, to select from and to utilize than any one person can ever hope to use effectively. Somehow, we, as educators,must learn to assess our own limitations, physical, emotional, and mental, in a realistic way and then settle upon a course of action which will produce optimum results in achieving the goals of education as we see them. This will almost surely lead us into a realization that we must remain continuous learners ourselves. We must forget about our desires to be independent, free agents who can solve all problems ourselves, but learn to become effective members of a team and have faith in, and respect for, the contributions made by others. It is much simpler to latch upon a set of techniques, adopt a philosophy, specify some immediate goals and teach, leaving all the other peripheral, and not so peripheral, problems to someone else. This approach, while comforting to many individuals, may create more problems than it ever solves, and is indeed unlikely to advance the cause of education of the hearing handicapped. If we can learn to become sufficiently flexible in our thinking to entertain the ideas of others, if we can develop the art of enthusiastically working with other educators, if we can be ready for change yet take sufficient time to investigate and evaluate a new idea before we choose it as a key to a problem and enthusiastically use

and promote it, and if we can do these things without becoming overwhelmed by the immensity of the tasks before us and can take time to relax and "get away from our work," we are prepared for the mental, emotional and, dare I say, "spiritual" rewards of being an educator of the hearing handicapped.

The Ultimate Worth of the Teacher in Child Development

Thirdly, from personal observation, as well as the implications from what he has read, the author would sum up the whole area of education of the hearing handicapped with all its various techniques, philosophies and mechanical aids as basically being determined by the qualities of the teachers who are presenting the materials or, more basically, who are educating the children. Which of these methods and philosophies are successful is determined by the manner in which they are used by the teachers.

The effectiveness of teachers is determined by many factors including such things as personality, physical vigor, and training. To a considerable extent, these are beyond the control of school systems but of equal importance to teacher effectiveness is the class load, which varies not just by numbers but by the needs of the pupils and the variations of these needs. It is extremely important that each teacher be given a teaching assignment which makes it possible for him or her to work out suitable programs tailored for each child.

In order to be maximally effective, the author further suggests that the teacher must be given the opportunity and the time to work with the parents of each child. Work with parents cannot be on just a scheduled basis. The teacher should be available to the parents when the parents feel a need to understand more about their child's development. Ideally, there should be a time each day when the teacher is available to parents on an informal basis, with perhaps just a previous telephone call to say that they will be in.

It is recognized that there are many schools where this kind of availability is questioned and even feared, but in the best interests of the children, the parents and even the teachers, the author is convinced that it should be done. As a parent of hearing handicapped children, he is very sensitive to the need for guidance and emotional support on the part of parents, especially during their child's early years of schooling. Also, he is sensitive to the need to minimize emotional stresses within the home and in family relationships and an available teacher can be very helpful in this regard. Further, the teacher will never really understand the child until he or she understands the parents and the total home environment in which the child lives. With this kind of relationship the teachers and parents will together develop better overall management of the child.

It is recognized that some parents may become overdependent upon the teacher and school but even this has the advantage of exposing an inadequacy on the part of the parents which should be handled professionally.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

A study was made of language instruction methods used to educate the partially hearing in three countries: The United States, Great Britain and Canada. It was carried out in two parts, one was a questionnaire survey of departments of educations and schools and the other a review of the literature written on this subject during the past decade in the three countries.

The results of the questionnaire survey were compiled and tabulated and these were discussed in the light of information gleaned from the readings. Some of the philosophical aspects of education for the hearing handicapped were discussed briefly.

Conclusions

As the study progressed it was found impossible to examine and consider the educational needs of the partially hearing separately from those of the deaf because there appears to be no clear distinction between the two groups. A sounder approach appeared to be to examine instructional procedures used with the hearing handicapped which encompasses both the deaf and the partially hearing.

While much remains to be learned about the most desirable educational practices for the hearing handicapped some very basic approaches stand out as worthy of a fair trial. These include:

1. Very early screening for hearing deficiencies plus follow up assessments for those infants who fail the screening tests.

2. Fitting of hearing aids as soon as a hearing loss has been detected unless some physical or emotional abnormality prevents such a fitting.

3. Careful counselling and instructing of parents immediately upon the detection of their child's hearing loss so the parents can help their children to overcome what could become a serious handicap. There is evidence that many hearing handicapped children develop near normal language if amplification is used and training is given from early infancy.

4. Full exposure to a normal, oral, hearing environment.

5. Special instruction based upon the demonstrated needs of each individual child.

It will take time for these to become generally applied practices but there are some such programs now in existence and, if they prove their worth, as early reports indicate that they will, their acceptance is bound to spread. Perhaps we are indeed on the verge of a breakthrough which will largely overcome the language and emotional problems which have so long accompanied hearing deficits.

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APPENDIX A

Covering Letters for Questionnaires

James Short School,
138 - 5th Avenue S.W.,
CALGARY, Alberta, Canada.

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Gentlemen:

The Department of Special Education Services of the Calgary Public School Board under the guidance of Dr. C. Safran, Superintendent of Special Education Services, is in the process of developing an extensive curriculum for partially hearing children in our system. As part of the background for this project it has been decided to seek some first hand information about the training and education of these children from other centres which are operating similar programs. Two questionnaires have been developed for this purpose.

It would be very helpful if you would complete the attached questionnaire A on the general administrative aspects of education for the hearing handicapped in the area under your educational jurisdiction and return it to me. A self-addressed stamped envelope is enclosed for your reply.

It would be of further assistance if two or three of your schools which work with partially hearing children could be approached directly for additional and more specific information about their programs. If you are willing to permit direct communication with your schools for this purpose,

please fill in the portion of the questionnaire which asks for information re schools which may be contacted directly. Enclosed are copies of the letter and questionnaire which would be sent to these schools.

It is recognized that the terms "hearing handicapped", "partially hearing" and "profoundly deaf" are subject to a variety of interpretations. In this study "hearing handicapped" will infer having sufficient deficiency in hearing sensitivity to make the normal acquisition of oral communication difficult if not impossible. "Partially hearing" will be used to mean partial hearing sensitivity which can be useful in learning speech and in communicating orally with the use of amplification. "Deaf" or "Profoundly deaf" should be interpreted to mean having no hearing sensitivity which can be useful in oral communication even when amplification is used.

If you have any printed materials which describe your program(s) they would be welcome in addition to or in lieu of the information sought by the questionnaires.

Thank you for your consideration of this matter.

Yours truly,

Percy L. Baxter,
Assistant Principal.

James Short School,
138 - 5th Avenue S.W.,
CALGARY, Alberta, Canada.

, 19

Dear

Your name was submitted to me by the State or Provincial Department of Education with whom you work. Enclosed is a copy of the letter and general administrative questionnaire which was sent to the Department. These will explain the purpose behind this letter and the questionnaire seeking information about your school and it's programs.

It will be much appreciated if you will take a few minutes to complete the questionnaire B designed for your school and return it to me in the enclosed, self-addressed envelope. Much effort has been made to make it as simple as possible to complete but, where the check lists and short answers do not give a clear picture of your program, please feel free to give a more specific or detailed account on the back of the questionnaire pages.

As is mentioned in the letter to the Department, printed information about your school is welcome.

Yours truly,

Percy L. Baxter,
Assistant Principal.

APPENDIX B

Follow Up Letters

James Short School,
920 - 13th Avenue S.W.,
Calgary 3, Alberta,
May 24th, 1968.

Dear

In October or November of 1967 I mailed to you two questionnaires relating to the instruction of partially hearing children. One was designed for Departments of Education (A), such as yours, and the other for schools (B) the names of which I requested that you submit to me. It was my hope that you would complete the Questionnaire A and return it to me in the self-addressed, stamped envelope provided.

Since I have not received a reply, I presume that it got set aside to make way for more urgent matters. However, since the study which I am making has not been completed, your responses to the questionnaire would still be useful to me but I must have them before the end of June. If you do not wish to participate in this study I would appreciate knowing this and why.

If by chance, you did not receive these questionnaires please let me know and I will send you another set along with covering letters.

Thank you for your attention to this matter.

Sincerely yours,

Percy L. Baxter,
Assistant Principal.

P.S. - It would be helpful if all replies were to be sent to my home address: 4420 - 8th Avenue S.W., Calgary 5, Alberta. This will keep them separate from our regular school mail.

James Short School,
920 - 13th Avenue S.W.,
Calgary 3, Alberta
May 23rd, 1968.

Dear

Early this year I mailed to you two questionnaires relating to instruction of partially hearing children - one designed for Departments of Education (A) and one for schools such as yours (B). It was my hope that you would complete the Questionnaire (B) insofar as it applies to your school and return it to me at your earliest convenience in the self-addressed, stamped envelope provided.

I quite appreciate the fact that educators generally are busy people and that it is often necessary for them to set aside temporarily matters which do not require immediate attention. If this has occurred in the case of these questionnaires I wish to let you know that I would still be very pleased to have the (B) form returned. If you do not feel that you wish to participate in this project, just a brief note telling me so and why would be appreciated.

If, by chance, you did not receive these questionnaires please let me know and I will send you another set along with covering letters.

It would be helpful if all replies were to be sent to my home address: 4420 - 8th Avenue S.W., Calgary 5, Alberta. This will keep them separate from our regular school mail.

Thank you for your attention to these requests.

Sincerely yours,

Percy L. Baxter,
Assistant Principal.

APPENDIX C

Questionnaire A for Departments of Education

"A" QUESTIONNAIRE DIRECTED TO DEPARTMENTS OF EDUCATION

1. Name of Department _____

Address _____

Wherever possible, check (√) appropriate answers.

2.A. Is it compulsory for hearing handicapped children to attend school in your State or Province? Yes ___ No ____.

B. At what age does compulsory education begin? 3 _____, 4_____, 5_____, 6_____ years. Older _____, Younger_____.

At what age does compulsory education end? 14_____ , 15 _____, 16 _____, 17 _____ years. Other (Specify)_____.

C. Is there legislation which compels local School Boards to provide educational facilities for the hearing handicapped?

Yes _____, No _____.

Explain _____

_____

D. For what ages is public financial support provided for the education of the hearing handicapped? _____ years to _____ years. Is this support larger than for educational programs designed for non-handicapped children?

Yes _____, No _____.

If larger, approximately how much? _____ %.

E. What publicly supported assistance is given to young hearing handicapped people beyond compulsory attendance age? e.g. vocational training, job counselling and placement, sheltered workshops, etc. _____

_____

_____

3. Does the Provincial or State Department of Education administer the education programs for the hearing handicapped re:

	No	Partially	Fully
(a) Curriculum?			
(b) Supervision of Schools?			
(c) Financing?			
(d) Teacher Selection?			
(e) Teacher Qualification?			

4. If department of education does not fully administer these programs, what other educational organizations are responsible for education of the deaf and partially hearing?

	No	Partially	Fully
(a) Churches			
(b) County School Units			
(c) City or Town Units			
(d) Others (Specify) _____			

5. Please indicate the approximate percentage of the "profoundly deaf group", and the "partially hearing group", which presently are being educated in your State or Province who fall into the categories listed on the sheets marked -3-. It is recognized that answers for several items have to be subjective to a considerable extent, but an opinion on each would be much appreciated. Please fill out one sheet for each of the following age groups: 2 to 5 years; 6 to 9 years; 10 to 13 years; 14 to 16 years; 17 to 20 years.

Age group: _____to_____ yrs.	Percent of the Profoundly Deaf				Percent of the Partially Hearing			
	1-25	26-50	51-75	76-100	1-25	26-50	51-75	76-100
(a) Are being educated in residential schools.								
(b) Are attending day classes for the deaf.								
(c) Are attending classes for deaf and partially hearing.								
(d) Are attending classes with hearing children.								
(e) Are being instructed by purely oral methods.								
(f) Are being instructed partially by oral methods.								
(g) Are receiving little or no oral instruction.								
(h) Are using amplification most of the time to augment their defective hearing.								
(i) Use amplification part of the time.								
(j) Use amplification infrequently, if at all.								
(k) Show evidence of gaining competency in oral communication with hearing people.								

Age group: _____to_____yrs.	Percent of the Profoundly Deaf				Percent of the Partially Hearing			
	1-25	26-50	51-75	76-100	1-25	26-50	51-75	76-100
(l) Show evidence of developing competency in reading comprehension.								
(m) Show evidence of gaining competency in written communication.								
(n) Started formal education before age 5 years.								
(o) Started formal education after age 6 years.								
(p) Have other physical handicaps than hearing loss.								

6. List below two or three of the leading schools in your State or Province which instruct partially hearing children and which would likely co-operate in giving more detailed information about their educational programs. It is assumed that the listing of their names below indicates your approval of their being contacted directly for such information.

1. School Name _____

   Address _____

   Head Administrator's Name _____ Title _____
   Principal, Superintendent, etc..

2. School _____

   Address _____

   Head Administrator _____ Title _____

3. School _____

   Address _____

   Head Administrator _____ Title _____

7. Comments re any items on this questionnaire or about aspects not covered by this questionnaire or about trends for the future. _____

_____

_____

_____

_____

_____

APPENDIX D

Questionnaire B for Schools

"B" QUESTIONNAIRE FOR SCHOOLS INSTRUCTING PARTIALLY HEARING CHILDREN

I. Name of School _____

Address of School _____

Number of day pupils _____ Number of res. pupils ____

Number of teachers who instruct pupils full time _____

part time _____

II. Please check (✓) appropriate answers wherever possible. Otherwise write in brief answers as indicated. Additional comments re any items, or matters not covered by the following items, may be made at the end of the questionnaire in the space provided or on the back of any sheet.

1. How many children have you in your school's program for the partially hearing? (a) Total all ages ____

(b) Under 6 yrs. of age _____? (c) 6 to 8 yrs.___?

(d) 9 to 11 yrs. _____? (e) 12 yrs. & over _____?

2. What is the median age at which partially hearing children -

(a) enter your program? (b) leave your program?

_____years. _____years.

3. What percentage of your children have specialized training for the hard of hearing before they enter your program? none _____, 1 to 25% _____, 26 to 50% _____, 51 to 75% _____, 76 to 100% ____.

Where is this training obtained? (Check each appropriate answer.)

(a) At home with parents who have guidance by correspondence _____.

(b) Under a private therapist. _____

(c) Under clinical guidance. _____

(d) In a pre-school program designed for the hard of hearing. _____

(e) In pre-school programs for hearing children. _____

(f) Others (Specify) _____

4. On what time basis does the average child attend pre-school programs outside of the home?

(a) five full days per week? _____

(b) five half days per week? _____

(c) one or two lessons per week? _____

(d) three or more lessons per week? _____

(e) less frequently than one lesson per week? ____

5. Are pre-school programs

(a) required by State or Provincial law? _____

(b) eligible for State or Provincial grants, but instituted by the initiative of Local Educational authorities? _____

(c) operated mainly by Local Educational authorities? _____

(d) operated by private individuals or groups? ____

(e) operated by other arrangements (Specify) ____

_____

6. Please indicate the approximate percentage of the children in your program which fall into these categories. Fill out one page for each of the following age groups: 2 to 8 years; 9 to 13 years; 14 years and over.

Age Group: _____

	None	1 - 25%	26- 50%	51- 75%	75- 100%
(a) Have average hearing losses of less than 50 dB.					
(b) Have average hearing losses of between 50 dB, and 65 dB.					
(c) Have average losses between 65 and 80 dB.					
(d) Have average losses of greater than 80 dB.					
(e) Have less than 80 dB loss and use amplification most of the time (either individual aids or group aids).					
(f) Have less than 80 dB loss, and use amplification only infrequently.					
(g) Receive basically oral instruction, supported by reading and writing.					
(h) Receive both manual and oral instruction.					
(i) Receive most instruction manually with support of reading and writing.					

Age Group: _____	None	1 - 25%	26- 50%	51- 75%	76- 100%
(j) Receive instruction only in classes for the hard of hearing.					
(k) Receive instruction with hearing children and in special programs designed for hard of hearing.					
(l) Receive nearly all instruction in classes designed primarily for hearing children.					
(m) Receive instruction by other arrangement (Specify) _____ _____ _____					
(n) Have another disability other than impaired hearing.					
(o) Receive special help for a second or third handicap.					

7. This section is based mainly upon subjective judgements, but your considered opinion will be much appreciated. (We are concerned here with partially hearing children having less than 80 dB average loss)

A. A child obtains optimum value from his hearing aid when it is worn (i) nearly all of the child's waking hours _____

(ii) only when the child is in a communication situation both in school and out of school _____

(iii) only when the child is motivated to listen _____

(iv) in other situations (Specify) _____ _____

B. Which type of amplification is most satisfactory for classroom instruction? (Number these in order of preference 1, 2, 3, 4.)

(i) Individual body model hearing aid _____.

(ii) Individual ear level hearing aid _____

(iii) Group hearing aid with fixed control boxes and headsets _____

(iv) Induction loop system with individual hearing aids _____

(v) Other (Specify) _____

7. (continued)

C. Where do partially hearing children show the most satisfactory academic growth including speech development? (Mark these 1, 2, 3)

(i) In special classes for the partially hearing._____

(ii) In special classes for the partially hearing and deaf. _____

(iii) In classes with hearing children._____

(iv) In classes with hearing children when out of class assistance is given by "specialists" _____

(v) In special classes where partial integration with hearing children is a regular part of the program. _____

D. Where does the overall personality of these children develop best?
In (i) _____ (ii)_____ (iii)_____ (iv) _____ (v) _____ of C above.

8. Which criteria are used in selecting pupils for your programs for the partially hearing? (Try to rank them in order of importance i.e. 1, 2, 3, etc. Where two criteria are of equal importance mark both with the same number).

(a) pure-tone audiometric test _____

(b) an extensive hearing sensitivity assessment _____

8. (continued)

(c) an otological examination _____

(d) failure to function well in classes for hearing children _____

(e) retarded language development _____

(f) at least average intelligence rating _____

(g) superior intelligence rating _____

(h) normal emotional stability _____

(i) others (indicate) _____

9. In your programs for the partially hearing indicate approximately what percent of total instruction time is devoted to each subject at the indicated age levels.

Subjects	Age of Pupils				
	Under 6 yrs.	6-9 yrs.	10-12 yrs.	13-15 yrs.	16 yrs & over
(a) Auditory Training					
(b) Speech Therapy					
(c) Formal language					
(d) Informal language					
(e) Reading					
(f) Creative play					
(g) Arithmetic					
(h) Science					
(i) Geography					
(j) History					
(k) Physical Education					
(l) Other subjects (list) _____					

Note - Sending a sample of a typical time-table for each age group would be helpful.

10. Please check the audio visual aids which are used regularly in your programs for the partially hearing.

(a) reading charts _____

(b) phonetic charts _____

(c) chalkboards _____

(d) models including toys _____

(e) counting beads and blocks _____

(f) maps _____

(g) globes _____

(h) disc recordings of: music _____, speech _____, other sounds _____

(i) tape recordings of: music _____, speech _____, other sounds _____

(j) opaque projectors _____

(k) overhead transparency projectors _____

(l) radios _____

(m) televisions _____

(n) dramatizations by pupils or teacher _____

(o) group auditory trainers _____

(p) language masters _____

(q) photographs _____

(r) filmstrips _____

(s) movies with sound track _____

(t) silent movies with printed captions _____

(u) others (specify) _____

_____

11. Indicate how frequently these instructional procedures are used with your pupils. Also indicate how you would rate the value of each as effective producers of sound educational results.

Frequency of Use - (a) never used
(b) used infrequently
(c) used frequently
(d) used regularly

Evaluation - (a) poor
(b) fair
(c) average
(d) good

Please fill in one form for each of the following age groups: 2 to 8 yrs., 9 to 13 yrs., 14 yrs. and over.

Age group _____

Procedures	Frequency of Use (a)	(b)	(c)	(d)	Evaluation (a)	(b)	(c)	(d)
1. Free creative play with dress up clothes, blocks, etc.								
2. Self-expression activities such as painting and modelling.								
3. Field trips (to zoo, stores, etc.)								
4. Language motivating group activities (baking a cake, making model forms, etc.)								
5. Individual pupil activity using teacher prepared learning devices such as word and picture matching.								
6. Individual activity with arithmetic learning materials such as Cuisenaire rods, Montessori bead chains, etc.								

11. (continued)

	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
7. Science corners, growing things, keeping pets.								
8. Story telling from picture books.								
9. Discussion centered around slides or film strips.								
10. As (9) with movies.								
11. Dramatization.								
12. Reading from experience charts.								
13. Reading from regular reading series.								
14. Reading workbooks								
15. Programmed reading.								
16. Language lessons centered around photographs or movies of special class activities.								
17. Language workbooks.								
18. Programmed language.								
19. Arithmetic workbooks.								
20. Programmed arithmetic.								
21. Finger plays, rhymes, action songs.								
22. Rhythm band.								
23. Lecture method.								

11 (continued)

	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
24. Teacher demonstration followed by pupil practice.								
25. Teacher led discussion.								
26. Pupil led discussion.								
27. Television instruction.								
28. Radio instruction.								
29. Other programmed subjects.								
_____								
_____								
_____								
30. Other instructional procedures.								
_____								
_____								

12. If special provisions are made for multiply-handicapped children who have hearing losses, please indicate the main special provisions which are made for their other handicaps. _____

_____

13. Please list the tests you use to assess the mental potential of your pupils. (Group I.Q. tests, individual tests, etc.) by name and publisher if possible.

Tests.	Your Opinion of Their Usefulness Poor	Fair	Good	Excellent

14. Do you have a curriculum designed especially for the partially hearing? Yes _____ No _____

If "Yes" who was responsible for its development?

_____

A copy of this curriculum along with this completed questionnaire would be much appreciated. The cost of such material will be remitted gladly if requested. If you cannot send a copy, from whom may it be obtained?

_____

_____

_____