

Teachers of Children

Who Are Hard of Hearing

A Report Based on Findings from the Study

QUALIFICATION AND PREPARATION OF TEACHERS OF EXCEPTIONAL CHILDREN

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This publication is a part of the broader study

Qualification and Preparation of Teachers of Exceptional Children

Conducted by the Office of Education and made possible by the cooperation of many agencies and individuals, and with the special help of the Association for the Aid of Crippled Children, New York City.

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FOREWORD

THIS PUBLICATION is one of a series reporting on the nationwide study, *Qualification and Preparation of Teachers of Exceptional Children*, which has been one of the major continuing projects of the Office of Education. More than 2,000 persons concerned with some aspect of the education of handicapped or gifted children have participated in the broad study.

The manner in which this study has been conducted is an example of cooperative action among persons from many organizations, school systems, colleges and universities, and the staff of the Office of Education.

This publication reports that part of the information from the broad study which has bearing on the qualification and preparation of teachers of children who are hard of hearing. The findings represent the opinions of many leaders in this field. The Office hopes that the publication will be useful and helpful to teachers, to directors and supervisors, to local school administrators, and to instructors in colleges and universities offering professional preparation to potential leaders in the education of exceptional children.

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ACKNOWLEDGMENTS

SO MANY PERSONS have contributed to the study reported here that it is a truly cooperative project. Although everyone who aided is not here acknowledged individually, appreciation is extended to each one, for without such cooperation this report would not have been possible. For major contributions special gratitude is due:

- ◆ The Association for the Aid of Crippled Children for their cooperation throughout the project.
- ◆ The members of both the National Advisory and the National Policy Committees, for their wise counsel and guidance.
- ◆ The consultants who gave advice on special problems.
- ◆ The teachers of hard of hearing children who carefully completed extensive inquiry forms.
- ◆ The members of the Competency Committee who prepared a statement of the distinctive abilities and knowledge needed by teachers of children who are hard of hearing.
- ◆ The educators who assisted in developing and pretesting items contained in the inquiry forms, among whom were: CHARLOTTE B. AVÈRY, JACK W. BIRCH, MRS. SERENA F. DAVIS, ROSE V. FEILBACH, GLADYS FISH, SIBYL GHOLSON, ELOISE KENNEDY, MRS. ROSE OWENS, and MRS. PEARL B. SISK.
- ◆ NAOMI NEHRER, ALBERT PELLEY, and ANN STEVENSON BERMAN of the study staff, who assisted in collating and preparing data for publication.
- ◆ HERBERT S. CONRAD, Director, Educational Statistics Branch, Office of Education, who has played an important part in the planning and execution of this project, and MRS. MABEL C. RICE and other members of the staff who assisted in the planning and execution of some of the statistical operations.

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SECTION 1

Introduction

THIS IS A REPORT for those who are concerned with the qualifications of teachers of hard of hearing children. For State or local directors of special education planning inservice training programs, for college professors viewing mounting demands on college curriculums, and for teachers of hard of hearing children striving to improve themselves, the information should be helpful. The Nation has become acutely aware that the competence of its teachers is closely correlated to the quality of the education the children receive. Educational leaders know that if they are to improve the schools they must not only understand the students they are to teach, and determine the kind of education most appropriate, but also must determine the kind of teachers they will recruit.

Teachers of hard of hearing children function in different ways—some are responsible for the total classroom experience of hard of hearing children, others operate as resource specialists, working with regular classroom teachers or directly with children who are hard of hearing. This is a report of a study of the qualifications and preparation for these teachers. The hard of hearing children with whom they work can not be precisely defined. The confusions that exist in definition rest partly on the differences in frames of reference between those who view the child on an educational continuum and those who view the child from a physiological basis. The inherent difficulties in categorizing people into types are nowhere more apparent than in the categorization of the "hard of hearing" as being different from the "hearing" and from the "deaf." -Yet such a distinction is necessary in order to provide the appropriately different educational programs.

As a point of reference for this study, but with no intent of making a definitive classification of hard of hearing children, part of the definition from the committee report, page 6, is presented below.

For educational purposes, hard of hearing children are those with hearing problems whose total achievement in hearing, speech and language permit them



Courtesy of California State Department of Education

Learning depends on skills in auditory comprehension, language, and speechreading

to function satisfactorily with or without a hearing aid in a school with normally hearing children. The greatest common need of this group will be help in acquiring . . . skills for serviceable communication in a world of normally hearing children.

The study on which this present report is based was designed to collect information about the qualifications and preparation for teachers of children who are hard of hearing. As a part of a broad project in the U.S. Office of Education, "Qualifications and Preparation of Teachers of Exceptional Children,"¹ it shares the ultimate goal of providing information upon which to improve the education of the Nation's exceptional children.

Facts and opinions for the study were secured by two different methods: (1) A report from a committee of 10 leaders in the field of education of the hard of hearing and (2) the use of inquiry forms which were sent not only to the teachers working with the children²

¹ The broad study is described in appendix A, page 51. A list of titles of other publications in the series appears on the back cover page.

² See appendix B, page 53, for information relative to the teachers participating in this study. The procedure for selecting teachers was identical to that used in other studies in the series and was developed by the Educational Statistics Branch of the Office of Education.

but to directors and supervisors at the State and at the local level, and to college educators engaged in preparing teachers in this area of exceptionality.

In section 2 of this publication, the committee report is presented first, followed by the evaluations of 96 suggested competencies reported for the total participating teachers and a comparison of the ratings submitted by itinerant and non-itinerant teachers. In the same section are included the teachers' ratings of self-proficiency in each competency, a comparison of the competency and proficiency ratings, and a comparison of the committee report and the teachers' evaluations.

In section 3 are presented the evaluations of some professional experiences not only by the teachers, but also by State, local, and college personnel. All personnel evaluated student teaching experience and normal classroom experience. The teachers rated specific preparatory experiences, and the other participants evaluated several different training plans.

The report of this study is presented with the hope that current professional thinking will find the material helpful and interesting, and provocative not only along the lines suggested but also beyond the implications presented in section 4. Those who desire to improve the qualifications and preparation of teachers of children who are hard of hearing can use this report as one point of reference from which to chart their course.

SECTION 2

Competencies Needed by Teachers of Children Who Are Hard of Hearing

WHAT SPECIAL COMPETENCIES are needed by teachers of hard of hearing children? What are the distinctive responsibilities and activities of these teachers? Do they need personal qualifications different in degree or kind from those required of other teachers?

This section contains the report of the opinions of a committee of experts and the information on teacher evaluation of competencies from the inquiry forms, as well as a comparison of the two. A discussion of the inquiry form precedes that subsection.

A committee of experts was asked to identify and describe competencies required of teachers of hard of hearing children. Members of this committee were selected, insofar as possible, because they had had relevant teaching experience, supervisory or administrative responsibilities, or experience in educational programs preparing teachers in this area. (See appendix A.)

The committee members prepared a statement, not necessarily reflecting existing standards or curricula, but expressing rather their own convictions and practical ideals. They attempted to formulate a statement of those particular competencies—that is to say, specialized skills, knowledges, and understandings—which differ in degree or kind from the ones required of regular classroom teachers.

The committee was regarded as autonomous and alterations in its report were made only by committee action.

The Committee Report

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(Titles of committee members are shown on page IV.)



Courtesy of The University of Kansas Medical Center
 Watching, touching, and listening: an eager child learns to communicate

INTRODUCTION

In this report the committee will present the distinctive competencies that should be required of teachers of children who are hard of hearing. These specially trained teachers should possess not only the competencies to be described in this report, but should also possess knowledge of the philosophy, organization, curriculum, and methods of general education. A teacher who has these competencies can help the child with a hearing impairment to advance to his highest potential and to adjust himself to a society composed mostly of hearing individuals.

The child who is hard of hearing is essentially a normal child entitled to a total program of education that will provide him with the basic education desirable for all children who are to grow into responsible citizens. In addition to the education common to all children, he should receive compensatory education in auditory comprehension, speechreading (lipreading), speech, and language. He should be taught to make the best use of a hearing aid if he can be properly

fitted. *Whenever possible, his entire education should be obtained in a normal environment at home, school, and play.*

The regular classroom teacher cannot be expected to provide both basic and compensatory education for the child who is hard of hearing. A teacher with special knowledge, skills, and abilities in handling the problems of children with hearing impairments is needed to supplement and complement the classroom teacher. Such a specially qualified teacher will be invaluable, too, in promoting and establishing a better understanding by society of all the problems facing those with hearing impairments.

DEFINITION

For educational purposes, hard of hearing children are those with hearing problems whose total achievement in hearing, speech, and language permits them to function satisfactorily with or without a hearing aid in a school with normally hearing children. The greatest common need of this group will be help in acquiring, by means of auditory comprehension, speechreading, speech, and language training, the skills for serviceable communication in a world of normally hearing children.

Children cannot be classified as hard of hearing solely by reference to quantitative measurements in decibels or percentages, or even, by reference to limited qualitative terms, such as the type of hearing loss, speech discrimination scores, and so on. Not only is the extent of the handicap dependent upon the degree of loss, the type of loss, and the age of onset, but also on many other factors such as the child's intelligence, personality, special training, the attitude of his parents and himself toward the handicap, and the nature of the school situation and other environmental factors. Physical discomforts such as dizziness, head noises, and recruitment, which may accompany some hearing losses, must be considered also in determining the extent of the handicap.

The term "hard of hearing" refers to those auditorially handicapped children who make use of hearing in acquiring the major part of their speech and education. Essentially equivalent terms in this report are "the hearing handicapped," "children with hearing impairments," and "children with impaired hearing."

PERSONAL CHARACTERISTICS OF THE TEACHER

A teacher who is to work with the child with a hearing impairment needs specific personal characteristics over and above those necessary for every teacher of children. These characteristics may be different

in degree or kind from those needed by the teacher of normally hearing children.

The special teacher's voice, articulation, and speech patterns should be of the highest quality. Functionally normal mouth and lips upon which speechreading depends are imperative for teachers of children with hearing impairments. Normal hearing is an asset, but a teacher with a hearing loss may be acceptable if the quality and quantity of his hearing, with or without a hearing aid, permits him to function with the competencies described later in this report.

The committee has assumed that those who are willing to accept the discipline of the special training necessary to teach children who are hard of hearing have a sincere desire to teach exceptional children. The teacher will need the ability to project warmth and understanding to the child, and to accept the child and his hearing problem realistically and without untoward emotionality. Because he deals with children who have a complex problem and with educators and parents who may not fully understand this problem and are limited in their abilities to help, the teacher will need special insights. He should have a well adjusted personality able to cope effectively with personal frustration. Because he is often the only teacher with this specialty in a school system, and has only limited opportunity to obtain help from discussion with fellow specialists, he must be resourceful in using his own abilities and judgements. He must keep abreast of developments in his area of specialization by reading the professional publications, attending meetings, and in other ways continuing his training and professional growth. Like all other teachers who are called upon to work effectively with pupils, parents, and professional associates, he should be intellectually curious and openminded.

The teacher of children who are hard of hearing must be able to help his pupils to compensate for their hearing deficiencies by the cultivation of visual competencies. The teacher must have an artistic ability to create, or select and use, materials that will help to develop the child's ability to discriminate visually.

AUDITORY COMPREHENSION

The unique competencies of teachers of hard of hearing children center around two aspects of communication, namely, comprehension and expression. The first in development and, in a sense, the dominant avenue of comprehension of language for all children is hearing. Vision is a secondary avenue which is helpful in discriminating between words that are acoustically very much alike (for example, tool, pool). Recent technological developments in electronics have



Courtesy of Downtown Center, Indiana University, Indianapolis, Ind.

Games motivate auditory comprehension

made it possible for many more children with hearing impairments to use their hearing as a primary channel of reception of spoken language. *The training program of the child who is hard of hearing, whatever the degree and nature of the hearing impairment, must have its basis in the auditory presentation of language.*

The goal of the auditory comprehension program is to develop the maximum use of residual hearing with or without a hearing aid. The teacher does not expect to alter the sensory threshold of hearing. Apparent improvement in hearing is a result of the improved interpretation or discrimination of sound clues that are available along with the visual clues that can be seen on the face of the speaker and the contextual clues that are inherent in the situation itself. The acquisition of a properly fitted or prescribed hearing aid facilitates auditory comprehension for some children, but the hearing aid itself does not assure auditory comprehension, nor can a hearing aid be used to advantage with every type of hearing loss. In order to develop the skills necessary for effective teaching in the auditory comprehension program, the teacher must have the following basic knowledge:

KNOWLEDGE of the purposes of auditory stimulation to develop comprehension.

KNOWLEDGE of the relationship between perception of speech and the hearing loss as measured by audiometric and other recognized tests in hearing (such as those involving speech sound discrimination, recognition of spondee words, the use of PB lists, measurement of tolerance thresholds).

KNOWLEDGE of the limitations of hearing imposed by various types and degrees of qualitative and quantitative loss, recruitment, tinnitus, and tolerance characteristics.

KNOWLEDGE of the effect of previous auditory experience, language development, intelligence, personality, and attitudes of the child and his parents toward the hearing loss.

KNOWLEDGE of the significance of particular types and degrees of hearing loss with respect to the total educative process.

KNOWLEDGE of the principles of amplification and related matters involved in the selection, care, and use of hearing devices.

KNOWLEDGE of the techniques, textbooks, methods, materials, and equipment employed in teaching auditory comprehension.

KNOWLEDGE of methods of evaluating progress in auditory comprehension.

KNOWLEDGE of the problems in public understanding of auditory comprehension.

SPEECHREADING

Teachers of children who are hard of hearing must also be competent to provide training in the development of visual comprehension of spoken language. Systematic training of visual recognition and



Courtesy of Decatur Public Schools, Ill.

Speechreading leads to rapid understanding

comprehension of the movements of the speaking mechanism is a part of the speechreading program. A child with a hearing impairment will need to use his vision to help discriminate between words that are acoustically very much alike. Speechreading, a primary compensation as well as a supplementary skill, has as its goal the interpretation and discrimination of visible speech movements which, when combined with the auditory and contextual clues, result in understanding the speaker. The teacher should be proficient in teaching at least one method of speechreading and should have the following knowledge:

KNOWLEDGE of the relationship of speechreading to the child's total education.

KNOWLEDGE of emotional factors affecting success in speechreading. (For example, a very good speechreader may understand his principal readily when sent to the office on an "honor" errand, but may fail to speechread the same words on the same lips when a disciplinary act is anticipated.)

KNOWLEDGE of the formation of speech sounds, and how they appear to the speechreader.

KNOWLEDGE of the effect on sounds in connected speech of such factors as rate, rhythm, assimilation, and relevant personal speech characteristics.

KNOWLEDGE of the limitations of speechreading. (Almost half the sounds of English speech are invisible or obscure even on the lips of a person who has good speech. Many of the remaining visible sounds may be lost to the speechreader due to circumstances beyond his control such as the distance, poor light, unusual lip structure or lip movement patterns, and the rapid and carelessly enunciated speech of the general public.)

KNOWLEDGE of current methods of teaching speechreading.

KNOWLEDGE of materials and procedures in preparing original speechreading lessons to meet the needs of the individual child.

KNOWLEDGE of the relationship of auditory and visual clues and their simultaneous use in communication.

KNOWLEDGE of methods of evaluating progress in speechreading.

KNOWLEDGE of methods of helping others to understand the speechreading process.

SPEECH

The development of speech is normally dependent upon the auditory impressions that the child has received and continues to receive with or without a hearing aid. Impaired hearing involves, potentially or actually, some degree of distortion of auditory perception. The child with a hearing impairment, therefore, may be expected to speak in a manner which reflects this distortion. Not only does hearing play a primary role in the development of speech, but it continues to function as a basic feedback system by which the speaker monitors his speech. The teacher of the child with a hearing impairment must know how to develop and maintain adequate speech and language habits.

Vocabulary, articulation, pronunciation, rhythm, intonation patterns, and grammatical construction are all parts of the verbal expression of ideas which cannot be dealt with as isolated entities. The goal of speech training is to develop adequacy of speech which can best be



Courtesy of Downtown Center, Indiana University, Indianapolis, Ind.

Learning about sounds. This can be done in several ways

described as *the use of audible symbols that can be easily understood by a listener with normal hearing.* The teacher must have the following knowledge:

KNOWLEDGE of the orderly development of speech in both normally hearing children and those with impaired hearing.

KNOWLEDGE of the range and variety of normal speech patterns and the essential differences between those patterns and significant deviations from them.

KNOWLEDGE of phonetics, including the International Phonetic Alphabet.

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KNOWLEDGE of the principles and mechanics of production of sounds in isolation and in the context of syllables, whole words, phrases, and running speech.

KNOWLEDGE of the principles and mechanics of voice production.

KNOWLEDGE of principles and methods of speech correction, including procedures involved in the utilization of visual, tactile, and kinesthetic, as well as auditory stimulation.

KNOWLEDGE of speech correction techniques for children who are hard of hearing and who also have other impairments such as cerebral palsy and clefts of lip or palate.

KNOWLEDGE of relationship of type and degree of hearing impairment to speech perception.

KNOWLEDGE of procedures to enable those individuals who have a sudden loss of hearing to retain as nearly as possible their established normal speech and voice patterns.

LANGUAGE DEVELOPMENT

Language is the basic factor in human communication, and children first learn to use this complex symbol system through the auditory sense. Children with hearing difficulties must learn both the symbols (words) and the conventional use of these symbols in phrases and sentences. Two sentences, "Is it not so?" and "It is not so," illustrate the point. The same words (symbols) are used in slightly



Courtesy of Prince Georges County Schools, Md.

Language requires the learning of symbols and their use.

different order to convey very different meanings. The child who is hard of hearing will miss the implications of rhythm and inflection in the two sentences. He will have to be taught formally to associate meaning with each conventional pattern. The goal in language development is to teach hearing impaired children to understand the variety of meanings of words and the structure of language and to use this knowledge in communication. To meet this goal the special teacher must have knowledge as follows:

KNOWLEDGE of language development in children with normal hearing and the influence of hearing impairment on the acquisition of language.

KNOWLEDGE of methods of teaching language to children with normal and impaired hearing.

KNOWLEDGE of the methods of teaching reading to children with normal and impaired hearing and the influence of hearing impairment on the development of reading comprehension.

KNOWLEDGE of principles of acceptable English usage.

OTHER SPECIAL KNOWLEDGE

There is other special knowledge needed by the person who will teach the hard of hearing child:

KNOWLEDGE of legislation and policy regulations governing the education of children, particularly those with impaired hearing.

KNOWLEDGE of principles of mental hygiene and personality adjustment, especially as these are concerned with the problems attendant upon the impairment of hearing.

KNOWLEDGE of essential facts and principles of child development and child psychology.

KNOWLEDGE of basic anatomy, physiology, and neurology of hearing.

KNOWLEDGE of medical and nonmedical aspects of the conservation of hearing.

KNOWLEDGE of the essential facts and principles of the physics of sound and of hearing.

KNOWLEDGE of testing and evaluation procedures employed by other professional personnel in the examination and diagnosis of children who are hard of hearing, and of procedures customarily followed in assisting such children and their parents in availing themselves of the services of other professional personnel.

KNOWLEDGE of the personal and social adjustments that may be required of children with hearing impairments in an environment of normally hearing persons.

KNOWLEDGE of essential facts and principles of construction, maintenance, and use of equipment and materials employed in the instruction of children with impaired hearing.

KNOWLEDGE of basic structure, functions, operating policies, and procedures of schools, hospitals, clinics, national and local organizations, and other agencies serving the hard of hearing.

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KNOWLEDGE of the school curriculum of each child served and the special needs and potentials of each child in adapting to the curriculum, as well as the possibilities and means of adapting the curriculum to the child.

ESSENTIAL ABILITIES

In order to be maximally effective, the teacher must also cultivate the abilities that are essential in translating knowledge into competent instruction. The teacher of children who are hard of hearing needs, therefore, to possess the following:

ABILITY to give appropriately detailed and systematic instruction and to utilize the immediate occasion for such instruction in auditory comprehension, speechreading, speech correction, and language.

ABILITY to administer tests and examination procedures essential in the diagnostic evaluation of the hearing problems of individual pupils which is basic to effective programming.

ABILITY to adapt speech correction procedures and materials to needs, interests, and abilities of specific children.

ABILITY to motivate children with impaired hearing to cultivate and use better speech and language.

ABILITY to interpret the child's hearing loss and associated problems to his parents, teachers, and other persons concerned with the child's health, education, and general growth and development.

ABILITY to provide language situations for spontaneous expression.

ABILITY to use knowledge of phonetics in teaching correct speech responses.

ABILITY to assess the specific problems of each child with impaired hearing such as those involved in use of the telephone, adjustment to the speech patterns of particular teachers, communication under conditions of noise, participation in playground activities, and the like.

ABILITY to work cooperatively with others as a member of a team in planning, executing, and evaluating the overall educational and activity program and the associated professional services for each child with impaired hearing.

ABILITY to initiate and maintain effective working relationships with other professional personnel, such as physicians, psychologists, audiologists, speech correctionists, and social workers.

ABILITY to maintain and interpret adequate cumulative records of diagnostic tests, instructional activities, and examination procedures involved in the continuous evaluation of the effectiveness of the program for each child.

ABILITY to present clearly, interestingly, and with adequate interpretation the school program for children with impaired hearing to parent-teacher meetings, service clubs, civic organizations, and the general public through the press, radio, television, and by other means.

CONCLUDING REMARKS

We believe that every child with a hearing impairment has an inherent right to be accepted on his merits along with other children

in his environment, and to enjoy an education that provides not only the basic elements of well-rounded instruction but also the compensatory and supplementary services and training that he requires because of his hearing impairment. We believe that a qualified special teacher, working cooperatively with the home, the school, and special agencies can contribute effectively to a happy and successful life in a hearing world for the child who has a hearing impairment.

End of Committee Report

Teachers' Ratings of Competencies

The preceding committee report is a complete statement which expresses the qualifications which the leaders feel the teachers of hard of hearing children must have. A second method of securing opinion on teacher competencies was through the inquiry forms¹ sent to the teachers. Guidelines prepared by the study staff for the selection of the teachers in each of the States specified that the teachers selected be rated by their supervisors as superior and have specialized preparation for teaching hard of hearing children.

Of the 100 teachers in the study whose work concerned the hard of hearing child, 43 indicated they worked on an itinerant basis.² The other 57 taught under several different administrative arrangements which are described in appendix B. As a group, their work extended over a wide range of grade levels, from nursery and kindergarten to high school, and included in some instances children whom the teachers reported as deaf.

Working independently of the committee, the study staff, in collaboration with various specialists throughout the Nation, developed a list of 96 types of competencies, and each of the participating teachers was asked to rate each of the 96 items as "very important," "important," "less important," or "not important." The question which each respondent answered with reference to this list was: "In your present position as a teacher of the hard of hearing, how important is it that you possess the following competencies?" By means of statistical methods described in appendix C, the 96 competencies were ranked in order of importance as shown in table 1.

¹ See appendix D for excerpts from the inquiry form.

² See appendix B for further information about the participating teachers.

16 TEACHERS OF CHILDREN WHO ARE HARD OF HEARING

Table 1.—Relative importance which 100 teachers of children who are hard of hearing placed on a list of competencies

| Rank order of importance ¹ | Competencies | Rank order of proficiency ² |
|---|--|--|
| COMPETENCIES RATED "VERY IMPORTANT" ³ (1-44) | | |
| 1 | Ability to teach lipreading (speechreading) to hard of hearing pupils. | 3 |
| 2 | Knowledge or understanding of the lipreading process and different techniques of teaching lipreading at the primary, elementary, and secondary levels. | 5 |
| (sd) 3 ⁴ | Ability to inspire hard of hearing pupils to self-education for overcoming their difficulties, and to adjust to a hearing world. | 24 |
| 4 | Ability to develop a teaching atmosphere free from pressure and conducive to good mental health. | 13 |
| 5 | Knowledge or understanding of the educational significance of the amount of usable hearing. | 16 |
| (sd) 6 | Ability to help parents understand their child's limitations and potentials. | 23 |
| 7 | Ability to enunciate clearly and pronounce words correctly (legible lips). | 1 |
| 8 | Knowledge or understanding of the mental, social, and emotional traits which may result from a hearing loss. | 9 |
| 9 | Ability to improvise in selecting materials and activities for speech development, lipreading, auditory training, and language development. | 6 |
| 10 | Ability to make the special class program for the hard of hearing part of the total school program. | 33 |
| 11 | Ability to encourage and create situations in which the hard of hearing child has opportunity to converse naturally and freely with normally hearing pupils. | 12 |
| 12 | Ability to counsel hard of hearing children regarding their personal attitudes toward their physical handicap. | 10 |
| 13 | Ability to hear normal speech clearly, (with or without a hearing aid). | 2 |
| 14 | Ability to identify words and word-elements with which pupils have difficulty and to plan activities aimed at overcoming these. | 18 |
| 15 | Ability to teach speech development to hard of hearing pupils. | 11 |
| 16 | Ability to teach hard of hearing children to use visual clues in analyzing a situation and in communicating with others. | 15 |
| (sd) 17 | Ability to develop for each hard of hearing pupil an educational program which is a total continuous process involving the parents and regular school personnel. | 54 |

See footnotes at end of table.

Table 1.—Relative importance which 100 teachers of children who are hard of hearing placed on a list of competencies—Continued

| Rank order of importance † | Competencies | Rank order of proficiency † |
|--|--|-----------------------------|
| COMPETENCIES RATED "VERY IMPORTANT" ‡ (1-44)—Continued | | |
| 18 | Knowledge or understanding of the fatigue factor in hearing loss and its educational implications. | 14 |
| 19 | Knowledge or understanding of the effective use of classroom lighting in lipreading | 4 |
| 20 | Ability to develop good health habits of auditory, speech, and vision conservation of the hard of hearing. | 34 |
| 21 | Ability to teach hard of hearing pupils speech skills (telephone use, conversation, and so on). | 8 |
| 22 | Ability to make educational interpretations from audiograms. | 19 |
| 23 | Ability to help parents understand school placement. | 38 |
| 24 | Knowledge or understanding of causes of speech defects, including the relationship of speech and hearing. | 21 |
| *25 | Ability to teach language development to hard of hearing pupils. | 32 |
| 26 | Ability to help parents get factual information from clinics and agencies serving the hard of hearing, so they can better face the social and emotional problems arising from having a hard of hearing child in the family. | 27 |
| 27 | Knowledge or understanding of the effects of socioeconomic conditions and the emotional climate of the home on the hard of hearing child's growth and development. | 36 |
| (sd) 28 | Ability to teach the hard of hearing pupil to use and service his hearing aid. | 55 |
| 29 | Ability to counsel hard of hearing children regarding their limitations and potentialities. | 22 |
| 30 | Ability to identify various types of speech difficulties. | 28 |
| 31 | Ability to establish and maintain good working relationships with other professional personnel, such as physicians, psychologists, and social workers. | 37 |
| 32 | Ability to make educational interpretations from psychological reports. | 49 |
| 33 | Knowledge or understanding of methods and techniques of teaching the normal child. | 29 |
| 34 | Ability to work as a member of a team with other professional workers, such as medical and psychological personnel, in making a case study of a hard of hearing child aimed at planning a program suited to his needs and abilities. | 42 |

See footnotes at end of table.

18 TEACHERS OF CHILDREN WHO ARE HARD OF HEARING

Table 1.—Relative importance which 100 teachers of children who are hard of hearing placed on a list of competencies—Continued

| Rank order of importance ¹ | Competencies | Rank order of proficiency ¹ |
|---|--|--|
| COMPETENCIES RATED "VERY IMPORTANT" ¹ (1-44)—Continued | | |
| 35 | Knowledge or understanding of types, sources of procurement, and uses of special aids for teaching the hard of hearing, including individual and group hearing aids, visual speech equipment, and tape recorders. | 52 |
| 36 | Ability to counsel hard of hearing children regarding their educational problems. | 20 |
| 37 | Ability to interpret special educational programs for, and the problems and abilities of, hard of hearing pupils to the general public, regular school personnel, and nonprofessional school workers, such as bus attendants and school custodians. | 25 |
| 38 | Knowledge or understanding of the phonetic structure of English speech. | 26 |
| 39 | Ability to counsel hard of hearing children regarding their social problems. | 50 |
| *40 | Ability to operate and use amplifiers, group hearing aids, auditory training units, and other audio-aids. | 45 |
| (sd) 41 | Ability to help parents understand occupational placement. | 69 |
| 42 | Ability to counsel hard of hearing children regarding their vocational problems and life goals. | 56 |
| 43 | Ability to make educational interpretations from otological and other medical reports. | 57 |
| 44 | Knowledge or understanding of locations of, and services offered by, local nonschool agencies serving hard of hearing children and their parents, such as health departments, vocational rehabilitation agencies, and recreational and civic groups. | 35 |
| COMPETENCIES RATED "IMPORTANT" (45-91) | | |
| 45 | Knowledge or understanding of types of hearing loss, such as conductive, perceptual, and psychogenic, and their educational implications. | 46 |
| 46 | Ability to administer speech-hearing tests to hard of hearing children. | 60 |
| 47 | Ability to administer pure-tone audiometric tests to hard of hearing children. | 41 |
| (sd) *48 | Ability to work with normally hearing children in helping them accept the hard of hearing child (e.g., by showing them how a hearing aid operates). | 17 |
| (sd) 49 | Knowledge or understanding of the anatomy and physiology of the hearing mechanism. | 30 |

See footnotes at end of table.

Table 1.—Relative importance which 100 teachers of children who are hard of hearing placed on a list of competencies—Continued

| Rank order of importance † | Competencies | Rank order of proficiency † |
|--|---|-----------------------------|
| COMPETENCIES RATED "IMPORTANT" (45-91)—Continued | | |
| *50 | Ability to make educational interpretations from reports of social workers. | 47 |
| (sd) 51 | Ability to keep and use cumulative individual educational records of hard of hearing children. | 31 |
| 52 | Knowledge or understanding of reference materials and professional literature on the education and general welfare of hard of hearing children. | 39 |
| (sd) *53 | Knowledge or understanding of the grammatical structure of the English language. | 7 |
| *54 | Ability to provide hard of hearing pupils with opportunities in the curriculum for experience in health education. | 40 |
| 55 | Ability to work with vocational rehabilitation agencies in helping the hard of hearing youth toward occupational adjustment. | 69 |
| 56 | Knowledge or understanding of locations of, functions of, and services offered by national organizations concerned with the hard of hearing, such as the Council for Exceptional Children, American Hearing Society, and the American Speech and Hearing Association. | 48 |
| (sd) 57 | Knowledge or understanding of the anatomy and physiology of the speech mechanism. | 43 |
| (sd) 58 | Ability to provide hard of hearing pupils with opportunities in the curriculum for experiences in music. | 77 |
| 59 | Ability to give "first-aid" to hearing aids (day-to-day servicing). | 72 |
| 60 | Knowledge or understanding of the findings of research studies which have bearing on the education, psychology, and social status of the hard of hearing. | 65 |
| 61 | Knowledge or understanding of methods and techniques of teaching the socially and emotionally disturbed. | 73 |
| 62 | Ability to administer to hard of hearing children screening tests of hearing. | 51 |
| 63 | Ability to provide hard of hearing pupils with opportunities in the curriculum for experience in dramatic arts. | 68 |
| (sd) 64 | Knowledge or understanding of the various causes of hearing impairment, such as otosclerosis. | 44 |
| (sd) 65 | Ability to provide hard of hearing pupils with opportunities in curriculum for experiences in domestic arts. | 86 |
| 66 | Ability to work with architects and school administrators in planning and securing classroom and other special school equipment and housing facilities for hard of hearing children (adequate lighting, chalk boards, mirrors, soundproofing, and special tables). | 70 |

See footnotes at end of table.

20 TEACHERS OF CHILDREN WHO ARE HARD OF HEARING

Table 1.—Relative importance which 100 teachers of children who are hard of hearing placed on a list of competencies—Continued

| Rank order of importance ¹ | Competencies | Rank order of proficiency ² |
|--|--|--|
| COMPETENCIES RATED "IMPORTANT" (45-91)—Continued | | |
| (sd) *67 | Ability to participate in home-school activities. | 53 |
| 68 | Knowledge or understanding of methods and techniques of teaching the deaf child. | 80 |
| 69 | Ability to contribute to community leadership in establishing an educational program for hard of hearing pupils. | 61 |
| 70 | Ability to operate tape and other types of voice recorders. | 74 |
| (sd) 71 | Ability to provide hard of hearing pupils with opportunities in the curriculum for experiences in industrial arts. | 94 |
| *72 | Ability to operate and use filmstrip and motion-picture projectors and other visual aids. | 71 |
| *73 | Ability to teach a multigrade class of hard of hearing children extending from the elementary to the secondary level. | 64 |
| 74 | Ability to provide hard of hearing pupils with opportunities in the curriculum for experiences in fine arts. | 83 |
| (sd) *75 | Ability to organize and carry out field trips for hard of hearing pupils. | 63 |
| 76 | Knowledge or understanding of the one or more methods of teaching language to the deaf. | 79 |
| 77 | Ability to provide hard of hearing pupils with opportunities in the curriculum for experiences in arts and crafts. | 85 |
| 78 | Knowledge or understanding of present-day issues in the education of the deaf. | 66 |
| (sd) 79 | Knowledge or understanding of psychological terminology. | 62 |
| (sd) 80 | Ability to administer to hard of hearing children individual verbal and performance tests of mental ability: | 90 |
| 81 | Ability to administer to hard of hearing children standardized group achievement tests. | 76 |
| 82 | Knowledge or understanding of methods and techniques of teaching the mentally retarded child. | 81 |
| 83 | Knowledge or understanding of general plans of medical treatment for different types of hearing disabilities, such as the fenestration operation, mastoidectomy, and radium treatment. | 78 |
| 84 | Ability to administer an educational program for hard of hearing pupils (selection of personnel, finance, reporting, and so on). | 88 |
| 85 | Knowledge or understanding of methods and techniques of teaching the gifted child. | 87 |

See footnotes at end of table.

Table 1.—Relative importance which 100 teachers of children who are hard of hearing placed on a list of competencies—Continued

| Rank order of importance ¹ | Competencies | Rank order of proficiency ² |
|--|---|--|
| COMPETENCIES RATED "IMPORTANT" (45-91)—Continued | | |
| (sd) 86 | Knowledge or understanding of medical terminology relative to the hard of hearing. | 67 |
| 87 | Knowledge or understanding of the physics of sound, including fundamental concepts of acoustics. | 82 |
| 88 | Knowledge or understanding of recent developments in theories and controversies on diagnosis and treatment of different conditions resulting in a hearing loss. | 84 |
| 89 | Ability to administer to hard of hearing children group verbal and nonverbal tests of mental ability. | 89 |
| 90 | Knowledge or understanding of methods and techniques of teaching the aphasic child. | 95 |
| 91 | Knowledge or understanding of the basic theory of electronics as applied to amplifiers and hearing aids. | 92 |
| COMPETENCIES RATED "LESS IMPORTANT" (92-96) | | |
| 92 | Ability to use the visual speech techniques and equipment developed by Bell Telephone Laboratories, Chromovox, and others. | 86 |
| 93 | Knowledge or understanding of the methods and techniques of teaching the cerebral palsied child. | 91 |
| (sd) 94 | Knowledge and understanding of the history of education of the hard of hearing. | 58 |
| *95 | Ability to play a piano and to develop a rhythm band. | 93 |
| (sd) 96 | Ability to read lips. | 75 |
| COMPETENCIES RATED "NOT IMPORTANT"—NONE | | |

¹ The rank order of the items was arrived at by averaging the importance ratings made by the teachers. The rank of each item was determined by the average rating it received. See appendix C, p. 57, for further explanation of statistical procedure used.

² When the inquiry form was sent to teachers, they were requested to rate their own proficiency in each of the items on a scale of "good," "fair," and "not prepared." The rank of each item was determined by the average rating it received. On the average, teachers rated themselves "good" on items indicated by proficiency rank order numbers 1-57, "fair" on 58-96. No item received an average rating of "not prepared."

³ Items were classified into the four groups of importance according to their average ratings: "very important," "important," "less important," and "not important." See appendix C, p. 57.

⁴ The symbol (sd) denotes "significant difference." For all items marked with this symbol, analysts showed a statistically significant difference between the average rating of importance and the average rating of proficiency. A discussion of these differences may be found on p. 24. See appendix C, p. 57, for statistical procedures employed to determine significant difference.

⁵ Starred (*) items indicate competencies which showed a statistically significant difference between the average rating of importance given by the 57 classroom teachers and the average rating of importance given by the 43 itinerant teachers. See appendix C, p. 57, for statistical procedures employed to determine significant difference between the average rating of these two groups. A discussion of these differences may be found on p. 21.

Teachers' Evaluations of Competencies: An Analysis

The object of the following discussion is to highlight the information that seems significant in teacher evaluation as reported in table 1. Each reader, bearing in mind the nature of the statistical treatment, in which ratings of importance were changed to rank order, should refer to table 1 for added details to make further interpretations. In the following discussion the numbers in brackets refer to the rank order of importance of the competency discussed.

For the discussion, each item was put in only one category, although many of the items are subject to several interpretations. The following categories are used: (1) Teaching communication, (2) basic science, (3) program and curriculum planning, (4) equipment and materials, (5) counseling and guiding, (6) testing, (7) working with others, and (8) knowledge of other exceptionalities.

TEACHING COMMUNICATION

- [1] Ability to teach lipreading (speechreading) to hard of hearing pupils.
- [2] Knowledge or understanding of the lipreading process and different techniques of teaching lipreading at the primary, elementary, and secondary levels.
- [7] Ability to enunciate clearly and pronounce words correctly (legible lips).
- [11] Ability to encourage and create situations in which the hard of hearing child has opportunity to converse naturally and freely with normally hearing pupils.
- [13] Ability to hear normal speech clearly (with or without a hearing aid).
- [14] Ability to identify words and word-elements with which pupils have difficulty and to plan activities aimed at overcoming these.
- [15] Ability to teach speech development to hard of hearing pupils.
- [16] Ability to teach hard of hearing children to use visual clues in analyzing a situation and in communicating with others.
- [19] Knowledge or understanding of the effective use of classroom lighting in lipreading.
- [21] Ability to teach hard of hearing pupils speech skills (telephone use, conversation, and so on).
- [25] Ability to teach language development to hard of hearing pupils.

The competency rated as most important in table 1 is the ability to teach lipreading (speechreading), and the next most important is an understanding of the process and different techniques of teaching lipreading at the different academic levels.

Of the competencies ranking in the top 25, 11 emphasize the idea that teachers of hard of hearing children need to be specialists in teaching oral communication. The items included in this classifi-



Courtesy of California State Department of Education

Speaking: groups encourage spontaneous expression

cation are only those which are specific to teaching communication skills; many other competencies contribute to or are basic to teaching communication.

The abilities to teach lipreading [1] and speech development [15] are ranked higher than the ability to teach language [25] to the hard of hearing child. Had the sample of teachers been wholly of the classroom type this latter item [25] would likely have received a higher ranking. (See page 31 for a comparison of ratings by itinerant and non-itinerant teachers.)

The high ranking of the competencies to have "legible lips" [7] and to hear normal speech [13] emphasizes that certain personal characteristics are "very important" in teaching communication.

Speech correction is a major responsibility of the teachers of hard of hearing children if the competency to identify words and word elements with which the pupils have difficulty and to plan activities aimed at overcoming these [14] is interpreted in conjunction with the ability to teach speech development to hard of hearing pupils [15].

BASIC SCIENTIFIC KNOWLEDGE

- [24] Knowledge or understanding of causes of speech defects, including the relationship of speech and hearing.
- [30] Ability to identify various types of speech difficulties.

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- [38] Knowledge or understanding of the phonetic structure of English speech.
- [45] Knowledge or understanding of types of hearing loss, such as conductive, perceptual, and psychogenic, and their educational implications.
- [49] Knowledge or understanding of the anatomy and physiology of the hearing mechanism.
- [52] Knowledge or understanding of reference materials and professional literature on the education and general welfare of hard of hearing children.
- [53] Knowledge or understanding of the grammatical structure of the English language.
- [57] Knowledge or understanding of the anatomy and physiology of the speech mechanism.
- [60] Knowledge or understanding of the findings of research studies which have bearing on the education, psychology, and social status of the hard of hearing.
- [64] Knowledge or understanding of the various causes of hearing impairment, such as otosclerosis.
- [79] Knowledge or understanding of psychological terminology.
- [83] Knowledge or understanding of general plans of medical treatment for different types of hearing disabilities, such as the fenestration operation, mastoidectomy, and radium treatment.
- [86] Knowledge or understanding of medical terminology relative to the hard of hearing.
- [87] Knowledge or understanding of the physics of sound, including fundamental concepts of acoustics.
- [88] Knowledge or understanding of recent development in theories and controversies on diagnosis and treatment of different conditions resulting in a hearing loss.

The problem of deciding which competency items to include in the category "basic scientific knowledge" is a difficult one. A knowledge or ability which underlies the more specific competencies of teaching communication was generally placed in this classification.

The three basic knowledge items rated as "very important" were specifically related to speech. They included understanding causes of speech defects [24], ability to identify speech difficulties [30], and a knowledge of the phonetic structure of English speech. The other 12, valued as "important," covered knowledge in such fields as medicine, physiology, and physics as it relates to the problem of hearing impairment. The fact that all of the items in this category were considered to be at a level not less than "important" strongly suggests that the special competencies rest upon a broad, sound background of medical, physiological, psychological, and physical science.

PROGRAM AND CURRICULUM PLANNING

- [5] Knowledge or understanding of the educational significance of the amount of usable hearing.

- [10] Ability to make the special class program for the hard of hearing part of the total school program.
- [17] Ability to develop for each hard of hearing pupil an educational program which is a total continuous process involving the parents and regular school personnel.
- [18] Knowledge or understanding of the fatigue factor in hearing loss and its educational implications.
- [20] Ability to develop good health habits of auditory, speech, and vision conservation of the hard of hearing.
- [22] Ability to make educational interpretations from audiograms.
- [32] Ability to make educational interpretations from psychological reports.
- [33] Knowledge or understanding of methods and techniques of teaching the normal child.
- [43] Ability to make educational interpretations from otological and other medical reports.
- [50] Ability to make educational interpretations from reports of social workers.
- [51] Ability to keep and use cumulative individual educational records of hard of hearing children.
- [54] Ability to provide hard of hearing pupils with opportunities in the curriculum for experiences in health education.
- [58] Ability to provide hard of hearing pupils with opportunities in the curriculum for experiences in music.
- [63] Ability to provide hard of hearing pupils with opportunities in the curriculum for experience in dramatic arts.
- [66] Ability to provide hard of hearing pupils with opportunities in curriculum for experiences in domestic arts.
- [67] Ability to participate in home-school activities.
- [71] Ability to provide hard of hearing pupils with opportunities in the curriculum for experiences in industrial arts.
- [73] Ability to teach a multigrade class of hard of hearing children extending from the elementary to the secondary level.
- [74] Ability to provide hard of hearing pupils with opportunities in the curriculum for experiences in fine arts.
- [75] Ability to organize and carry out field trips for hard of hearing pupils.
- [77] Ability to provide hard of hearing pupils with opportunities in the curriculum for experiences in arts and crafts.
- [84] Ability to administer an educational program for hard of hearing pupils (selection of personnel, finance, reporting, and so on).

Into this classification have been put the competencies which concern developing total educational programs, those which refer to specific curriculum within the programs, and those which concern the educational interpretations to be made from certain data with respect to the hard of hearing child.

Of the many knowledges and abilities presented in table 1 having to do with factors in the planning of more adequate educational programs for the hard of hearing children nine were rated as "very important."

Valued highest was a knowledge of the educational significance of the amount of usable hearing [5] to integrate the special and ability program for the hard of hearing into the total school program [10]. Likewise the development of an educational program involving parents [17] is a "very important" competency, according to the teacher ratings. The ability to make educational interpretations from knowledge of fatigue factors in hearing loss [18], from audiograms [22], from psychological reports [32], and from otological (medical) reports [43] was "very important" in the broad concept of program planning.

Although of lower rank than many other competencies, a knowledge or understanding of the methods and techniques of teaching the normal child [33] is still considered as "very important."

One competency which was rated in the "important" rather than the "very important" class was the ability to administer an educational program for hard of hearing pupils (selection of personnel, finance, reporting, and so on) [84]. Although the reader may accept the inference that administrative skills do not insure teaching competence, yet he must be concerned whether the teachers should be sufficiently oriented (and sufficiently prepared) to be able to move into supervisory and administrative positions. This study did not attempt to make a basic inquiry into determining what the role of such teachers should be in 5, 10, 15 years; but the present data suggests that teachers are less concerned with supervisory than with direct teaching skills, and thereby suggests the need for further study of the future role of the present teachers.

With respect to developing specific curricula, or specialized program activities, the teachers rated as "important," rather than "very important" these special competencies: [54, 58, 63, 65, 67, 71, 73, 74, 75, 77]. For instance moderate to relatively low degrees of importance were accorded the ability to provide hard of hearing children with experiences in health education [54], music [58], dramatic arts [63], domestic arts [65], industrial arts [71], fine arts [74], and arts and crafts [77]. These ratings raise the question of whether the teachers felt that such experiences were comparatively unimportant for their pupils or whether someone else in their schools was responsible for these curricular activities. Possibly, too, the teachers felt inadequately prepared in these aspects of the curriculum. There is a tendency throughout table 1 to rate specific competencies at a lower level of importance than similar general competencies.

EQUIPMENT AND MATERIALS

- [9] Ability to improvise in selecting materials and activities for speech development, lipreading, auditory training, and language development.
- [28] Ability to teach the hard of hearing pupil to use and service his hearing aid.



Courtesy of Decatur Public Schools, Ill.

Listening: recordings develop rhythm

- [35] Knowledge or understanding of types, sources of procurement, and uses of special aids for teaching the hard of hearing, including individual and group hearing aids, visual speech equipment, and tape recorders.
- [40] Ability to operate and use amplifiers, group hearing aids, auditory training units, and other audio-aids.
- [59] Ability to give "first-aid" to hearing aids (day-to-day servicing).
- [70] Ability to operate tape and other types of voice recorders.
- [72] Ability to operate and use filmstrip and motion-picture projectors and other visual aids.
- [91] Knowledge or understanding of the basic theory of electronics as applied to amplifiers and hearing aids.
- [92] Ability to use the visual speech techniques and equipment developed by Bell Telephone Laboratories, Chromovox, and others.

The teachers rated very highly the ability to improvise in selecting materials and activities [9], although they recognized, as "very important," too, the necessity of understanding types, sources of procurement, and uses of special teaching aids [35]. The ability to teach hard of hearing children to use and service their hearing aids [28] and the ability to operate and use amplifiers, group hearing aids, auditory training units, and other audio-aids [40] were evaluated as "very important," in contrast to the "important" rating given to the ability to give day-to-day servicing to hearing aids [59] and to operate visual projection equipment [72], and to the knowledge of the theory of electronics [91], and to the "less important" ability to operate specific visual speech equipment [92].

COUNSELING AND GUIDING

- [3] Ability to inspire hard of hearing pupils to self-education for overcoming their difficulties, and to adjust to a hearing world.
- [4] Ability to develop a teaching atmosphere free from pressure and conducive to good mental health.
- [6] Ability to help parents understand their child's limitations and potentials.
- [8] Knowledge of understanding of the mental, social, and emotional traits which may result from a hearing loss.
- [12] Ability to counsel hard of hearing children regarding their personal attitudes toward their physical handicap.
- [23] Ability to help parents understand school placement.
- [26] Ability to help parents get factual information from clinics and agencies serving the hard of hearing, so they can better face the social and emotional problems arising from having a hard of hearing child in the family.
- [27] Knowledge or understanding of the effects of socioeconomic conditions and the emotional climate of the home on the hard of hearing child's growth and development.
- [29] Ability to counsel hard of hearing children regarding their limitations and potentialities.
- [36] Ability to counsel hard of hearing children regarding their educational problems.
- [39] Ability to counsel hard of hearing children regarding their social problems.
- [41] Ability to help parents understand occupational placement.
- [42] Ability to counsel hard of hearing children regarding their vocational problems and life goals.

Under this heading were grouped those competencies which concern the child's emotional growth and development as well as those which are usually classified as counseling and guiding. None of these were rated as less than "very important." The teachers place very great value on the ability to inspire hard of hearing pupils to self-education for overcoming their difficulties and to adjust to a hearing world [3], to develop a teaching atmosphere free from pressure and conducive to good mental health [4], to help parents understand their child's limitations and potentials [6], and to counsel hard of hearing children regarding their personal attitudes toward their physical handicap [12]. The teachers evaluated highly also an understanding of the mental, social, and emotional traits which may result from a hearing loss [8]. They rated somewhat lower, but yet as "very important," the ability to help parents get needed information from clinics and agencies serving the hard of hearing in order that they might better face the social and emotional problems arising from having a hard of hearing child in the family [26]. Although the competencies require specific techniques in counseling they require, also, a mature understanding and a broad background of experience and training, a thorough knowledge of the total behavior of children and of their parents, and knowledge of the many factors related to growth and development.

A distinct problem for educators is raised by those competency ratings which involve working with parents [6, 23, 26, 41]. What knowledge and what skills should the teacher have in order to work effectively with parents? To what extent are the present educational programs of professional preparation able to provide the prospective teacher with the knowledge and skills necessary to help parents understand, for example, the limitations and potentials of their children? To what extent are the teachers provided with not only information to tell the parent, but also the skills to work with parents?

TESTING

- [46] Ability to administer to hard of hearing children speech-hearing tests.
- [47] Ability to administer pure-tone audiometric tests.
- [62] Ability to administer to hard of hearing children screening tests of hearing.
- [80] Ability to administer to hard of hearing children individual verbal and performance tests of mental ability.
- [81] Ability to administer to hard of hearing children standardized group achievement tests.
- [89] Ability to administer to hard of hearing children group verbal and non-verbal tests of mental ability.

All of the competencies concerned with tests were considered "important." Highest value was given to those which are specific to the hard of hearing problem [46, 47, 62]. Of somewhat less value, yet still "important" were the abilities to administer group achievement tests and verbal and nonverbal tests of mental ability [80, 81, 89].

WORKING WITH OTHERS

- [31] Ability to establish and maintain good working relationships with other professional personnel, such as physicians, psychologists, and social workers.
- [34] Ability to work as a member of a team with other professional workers, such as medical and psychological personnel, in making a case study of a hard of hearing child aimed at planning a program suited to his needs and abilities.
- [37] Ability to interpret special educational programs for, and the problems and abilities of, hard of hearing pupils, to the general public, regular school personnel, and nonprofessional school workers, such as bus attendants and school custodians.
- [44] Knowledge or understanding of locations of, and services offered by, local nonschool agencies serving hard of hearing children and their parents, such as health departments, vocational rehabilitation agencies, and recreational and civic groups.
- [48] Ability to work with normally hearing children in helping them accept the hard of hearing child (e.g., by showing them how a hearing aid operates).

- [55] Ability to work with vocational rehabilitation agencies in helping the hard of hearing youth toward occupational adjustment.
- [56] Knowledge or understanding of locations of, functions of, and services offered by national organizations concerned with the hard of hearing, such as the Council for Exceptional Children, American Hearing Society, and the American Speech and Hearing Association.
- [66] Ability to work with architects and school administrators in planning and securing classroom and other special school equipment and housing facilities for hard of hearing children (adequate lighting, chalk boards, mirrors, soundproofing, and special tables).
- [69] Ability to contribute to community leadership in establishing an educational program for hard of hearing pupils.

Of the competencies which referred to working with other professional and nonprofessional persons and agencies, four were considered as "very important" and five as "important." Competencies in working with parents were not included in this classification, but rather were included in counseling and guiding. Recognizing that the child with a hearing problem has a need for a multidiscipline approach, the teachers evaluated as "very important" the development of good working relationships with medical and psychological personnel, with social workers, and with related rehabilitation and recreational workers [31, 34, 44].

Not only because the child needs the help of all related professional workers, but also because he is a part of an integrated school program, his problems must be understood by nonprofessional workers. The teachers felt that the ability to interpret the child's problems and potentialities to the public, and to nonprofessional school workers (bus attendant, etc.) [37] is "very important."

The ability to work for educational programs and services for the hard of hearing child with community leaders [69] and with architects and planners [66], and a knowledge of professional agencies [56] were considered "important." The teachers left little doubt by the above ratings that the child's hearing problem has far-reaching implications for the community.

KNOWLEDGE OF OTHER EXCEPTIONALITIES

- [61] Knowledge or understanding of methods and techniques of teaching the socially and emotionally disturbed.
- [68] Knowledge or understanding of methods and techniques of teaching the deaf child.
- [76] Knowledge or understanding of one or more methods of teaching language to the deaf.
- [78] Knowledge or understanding of present-day issues in the education of the deaf.

- [82] Knowledge or understanding of methods and techniques of teaching the mentally retarded child.
- [85] Knowledge or understanding of methods and techniques of teaching the gifted child.
- [90] Knowledge or understanding of methods and techniques of teaching the aphasic child.
- [93] Knowledge or understanding of methods and techniques of teaching the cerebral palsied child.

How important is it for teachers of the hard of hearing to have a knowledge or understanding of the education of children with handicaps other than impaired hearing? In general, the teachers seemed to limit their competencies primarily to the area of the hard of hearing. While the degrees of value they placed on knowledge of methods of teaching the deaf [68, 76, 78] and the socially and emotionally disturbed [61] were relatively low, the values were higher than those attached to understanding the methods of teaching mentally retarded children, gifted children, aphasic children, and children with cerebral palsy [82, 85, 90, 93]. These and other handicapping conditions are to be found among the hard of hearing and must, of course, be taken into account appropriately in any adequate educational program. To establish and develop such educational programs will necessitate further study of the many related problems.

Comparison of Competencies as Rated by Itinerant Teachers and Classroom Teachers

The question might be raised whether the competencies in table 1 would be ranked differently if the evaluations by itinerant teachers and by non-itinerant (classroom-type) teachers were considered separately. A comparison was made for the two groups and the competencies on which there was a significant difference of opinion were starred on table 1.³ No competencies were given a significantly higher rating by the itinerant group. The competencies valued significantly higher by the non-itinerant group are the following:

Ability to teach language development to hard of hearing pupils [25].

Ability to operate and use amplifiers, group hearing aids, auditory training units, and other audio-aids [40].

Ability to work with normally hearing children in helping them accept the hard of hearing child (e.g., by showing them how a hearing aid operates) [48].

Ability to make educational interpretations from reports of social workers [50].

Knowledge or understanding of the grammatical structure of the English language [53].

³ See appendix C for explanation of the procedure used in determining statistically significant differences.

Ability to provide hard of hearing pupils with opportunities in the curriculum for experiences in health education [54].

Ability to participate in home-school activities [67].

Ability to operate and use filmstrip and motion-picture projectors and other visual aids [72].

Ability to teach a multigrade class of hard of hearing children extending from the elementary to the secondary level [73].

Ability to organize and carry out field trips for hard of hearing pupils [75].

Ability to play a piano and to develop a rhythm band [95].

In a ranking of the evaluations made by only the classroom teacher of hard of hearing children, the ability to teach language development to hard of hearing pupils [25] ranked among the top ten. Valued by the total group as "very important" this competency would have been classed as "important" if only the itinerant teachers' evaluations were considered. Does this mean that some of the itinerant teachers feel that language instruction can be handled by some other teacher, and if so is the other teacher in fact able to fulfill this responsibility for the hard of hearing child? Likewise the competency relative to operating amplifiers, etc. [40], ranked by the total group as "very important" would have been ranked as "important" by the itinerant group.

For the competencies ranked as [48], [50], [53], and [54] the ranking of the total group was "important" whereas the ranking given by the classroom teachers of hard of hearing children alone would have moved these competencies to the "very important" class. There was no change in the importance grouping of the other competencies rated higher by classroom teachers of hard of hearing children.

Teachers' Self-Ratings of Proficiency

In responding to the inquiry form, the 100 teachers rated their own proficiency with regard to each of the competencies listed in table 1.⁴ The categories used for these ratings were those of "good," "fair," and "not prepared."

The 24 items with respect to which the 100 teachers felt most and least proficient are revealing and provocative. Many of the items appear to imply that the teacher of children with impaired hearing, so far as the present study may warrant such a statement, considers himself qualified primarily to help the child in acquiring communication skills, particularly the skill of lipreading, or speechreading. He also thinks of himself as quite proficient in understanding the

⁴ See appendix C for explanation of the statistical procedures used in computing the proficiency value shown in the right-hand column of table 1.

mental, social, and emotional effects of hearing impairment and in counseling children with hearing problems with respect to their personal attitudes toward the impairment.

The teacher in the study regarded himself as least proficient in teaching arts and crafts, in playing the piano, and in using visual speech equipment or in understanding relevant aspects of electronic theory, in administering mental tests, in understanding the methods used in teaching gifted children or children with such other handicaps as cerebral palsy or aphasia, or in program administration.

The competencies in which the teachers felt most proficient were:

| <i>Importance ranking</i> | <i>Competency</i> | <i>Proficiency ranking</i> |
|---------------------------|--|----------------------------|
| [7] | Ability to enunciate clearly and pronounce words correctly (legible lips). | [1] |
| [13] | Ability to hear normal speech clearly (with or without a hearing aid). | [2] |
| [1] | Ability to teach lipreading (speechreading) to hard of hearing pupils. | [3] |
| [19] | Knowledge or understanding of the effective use of classroom lighting in lipreading. | [4] |
| [2] | Knowledge or understanding of the lipreading process and different techniques of teaching lipreading at the primary, elementary, and secondary levels. | [5] |
| [9] | Ability to improvise in selecting materials and activities for speech development, lipreading, auditory training, and language development. | [6] |
| [53] | Knowledge or understanding of the grammatical structure of the English language. | [7] |
| [21] | Ability to teach hard of hearing pupils speech skills (telephone use, conversation, and so on). | [8] |
| [8] | Knowledge or understanding of the mental, social and emotional traits which may result from a hearing loss. | [9] |
| [12] | Ability to counsel hard of hearing children regarding their personal attitudes toward their physical handicap. | [10] |
| [15] | Ability to teach speech development to hard of hearing pupils. | [11] |
| [11] | Ability to encourage and create situations in which the hard of hearing child has opportunity to converse naturally and freely with normally hearing pupils. | [12] |

Competencies with respect to which the teachers considered themselves least proficient were, in order from more to less proficient:

| <i>Importance ranking</i> | <i>Competency</i> | <i>Proficiency ranking</i> |
|---------------------------|--|----------------------------|
| [77] | Ability to provide hard of hearing pupils with opportunities in the curriculum for experiences in arts and crafts. | [85] |
| [65] | Ability to provide hard of hearing pupils with opportunities in the curriculum for experiences in domestic arts. | [86] |

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| Importance rating | Competency | Proficiency rating |
|----------------------|--|-----------------------|
| [85] | Knowledge or understanding of methods and techniques of teaching the gifted child. | [87] |
| [84] | Ability to administer an educational program for hard of hearing pupils (selection of personnel, finance, reporting, and so on). | [88] |
| [89] | Ability to administer to hard of hearing children group verbal and nonverbal tests of mental ability. | [89] |
| [80] | Ability to administer to hard of hearing children individual verbal and performance tests of mental ability. | [90] |
| [93] | Knowledge or understanding of methods and techniques of teaching the cerebral palsied child. | [91] |
| [91] | Knowledge or understanding of the basic theory of electronics as applied to amplifiers and hearing aids. | [92] |
| [95] | Ability to play a piano and to develop a rhythm band. | [93] |
| [71] | Ability to provide hard of hearing pupils with opportunities in the curriculum for experiences in industrial arts. | [94] |
| [90] | Knowledge or understanding of methods and techniques of teaching the aphasic child. | [95] |
| [92] | Ability to use the visual speech techniques and equipment developed by Bell Telephone Laboratories, Chromovox, and others. | [96] |

How do these ratings of self-proficiency compare with the ratings of importance of the competency? In general, the teachers appear, on the basis of these data, to consider themselves more proficient in those competencies that they regard as more important and less proficient in those they consider less important.⁵

In table 2 are listed 9 items for which the teachers' ratings of importance were significantly higher than their ratings of their own proficiency, and in table 3 are 12 items for which proficiency ratings were significantly higher than importance ratings.⁶

IMPORTANCE RATED HIGHER THAN PROFICIENCY

Of all the 44 competencies rated as "very important" there were only 5 in which the teachers gave lower ratings of proficiency than they gave ratings of importance. Apparently the teachers would like to be more able to motivate the children, to counsel parents, and to strengthen the educational program for the hard of hearing child.

⁵This was borne out only to a moderate degree by the analysis made of a sampling of 10 competency items to determine the relationship between the importance and self-proficiency ratings of each individual teacher. Co-variation was measured in terms of the coefficient of contingency. The median coefficient of contingency for the 10 items was 0.35, with a range from 0.08 to 0.64. The maximum possible median values for the frequencies involved ranged from 0.49 to 0.75, with a median of 0.64.

⁶See appendix C for a discussion of statistical procedures used.

Table 2.—Competencies in which ratings of importance were significantly higher than self-ratings of proficiency (from table 1)

| Rank order of importance ¹ | Item | Rank order of proficiency ¹ |
|---------------------------------------|--|--|
| COMPETENCIES RATED "VERY IMPORTANT" | | |
| 3 | Ability to inspire hard of hearing pupils to self-education for overcoming their difficulties, and to adjust to a hearing world. | 24 |
| 6 | Ability to help parents understand their child's limitations and potentials. | 23 |
| 17 | Ability to develop for each hard of hearing pupil an educational program which is a total continuous process involving the parents and regular school personnel. | 54 |
| 28 | Ability to teach the hard of hearing pupil to use and service his hearing aid. | 55 |
| 41 | Ability to help parents understand occupational placement. | 69 |
| COMPETENCIES RATED "IMPORTANT" | | |
| 58 | Ability to provide hard of hearing pupils with opportunities in the curriculum for experience in music. | 77 |
| 65 | Ability to provide hard of hearing pupils with opportunities in the curriculum for experiences in domestic arts. | 86 |
| 71 | Ability to provide hard of hearing pupils with opportunities in the curriculum for experiences in industrial arts. | 94 |
| 80 | Ability to administer individual verbal and performance tests of mental ability to hard of hearing pupils. | 90 |

¹ The numbers represent the rank order of importance and proficiency as shown in table 1, p. 16. It should be noted that this table reports those competencies on which there was a statistically significant difference between the average rating of importance and the average rating of proficiency, not differences between rank order of importance and proficiency. See appendix C, p. 57.

Among all the competencies classed as "important" there are only four in which the teachers rate self-proficiency lower than importance. In each case the competency is in a specific area which might have been considered the province of another specialist—music, domestic arts, industrial arts, and mental testing.

IMPORTANCE RATED LOWER THAN PROFICIENCY

Among all of the "very important" competencies, as table 3 indicates, there are none in which there is a significantly lower rating of importance than of self-proficiency. But among the "important" com-

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petencies the 100 teachers gave a lower rating of importance than proficiency for 10 items. Six of these items [49, 53, 57, 64, 79, 86] have been previously categorized as being in basic science. The preponderance of basic science items suggests that the teachers feel somewhat competent in this background material yet do not feel that such knowledge is immediately necessary in their work with hard of hearing children.

Table 3.—Competencies in which ratings of importance were significantly lower than self-ratings of proficiency (from table 1)

| Rank order of importance ¹ | Item | Rank order of proficiency ¹ |
|---------------------------------------|---|--|
| COMPETENCIES RATED "IMPORTANT" | | |
| 48 | Ability to work with normally hearing children in helping them accept the hard of hearing child (e.g., by showing them how a hearing aid operates). | 17 |
| 49 | Knowledge or understanding of the anatomy and physiology of the hearing mechanism. | 30 |
| 51 | Ability to keep and use cumulative individual educational records of hard of hearing children. | 31 |
| 53 | Knowledge or understanding of the grammatical structure of the English language. | 7 |
| 57 | Knowledge or understanding of the anatomy and physiology of the speech mechanism. | 43 |
| 64 | Knowledge or understanding of the various causes of hearing impairment, such as otosclerosis. | 44 |
| 67 | Ability to participate in home-school activities. | 53 |
| 75 | Ability to organize and carry out field trips for hard of hearing pupils. | 63 |
| 79 | Knowledge or understanding of psychological terminology. | 62 |
| 86 | Knowledge or understanding of medical terminology relative to the hard of hearing. | 67 |
| COMPETENCIES RATED "LESS IMPORTANT" | | |
| 94 | Knowledge or understanding of the history of education of the hard of hearing. | 58 |
| 96 | Ability to read lips. | 75 |

¹ The numbers represent the rank order of importance and proficiency as shown in table 1, p. 14. It should be noted that this table reports those competencies on which there was a statistically significant difference between the average rating of importance and the average rating of proficiency, not differences between rank orders of importance and proficiency. See appendix C, p. 57.

A Comparison of the Committee Report and the Teachers' Evaluations

Certain similarities and differences between the attitudes and points of view of the Committee members and the teachers' evaluations can be seen. The teachers, of course, made their evaluations with definite reference to their day-to-day work while the members of the Committee wrote their report without reference to any particular situation or to prevailing practices or beliefs, but rather with regard to their opinions of the competencies of the relatively ideal teacher of children with hearing difficulties. The Committee did not indicate relative degrees of importance as did the teachers, therefore, direct comparison cannot be readily made.

Both groups took a broad view of the teacher's responsibilities to the child. They agreed in stressing the basic need for ability to give instruction, adapted effectively to each child's limitations and potentialities, in the four major aspects of communication important to children with impaired hearing: auditory comprehension, speech-reading, speech, and language. The Committee members and the teachers both attached importance to the understanding of speech and speech disorders and the ability to interpret audiograms and the results of various types of hearing tests. Both evaluated highly the ability to counsel parents of the child with a hearing problem and to work cooperatively with professional personnel and other members of the school staff, in providing the child with a good education and the special services required by him. There was clear agreement, too, with regard to the personal attributes needed by the teacher of children with hearing impairments; particular value was placed upon a sincere desire to teach exceptional children, a well adjusted personality, patience, good speech, and sufficient hearing, with or without a hearing aid, to function adequately.

The ability to inform the public of the problems of children with impaired hearing, of the problems of special school programs, and of the related services required was of importance to both the Committee and the teachers. They valued too, a knowledge of the programs and services provided by, and of the structures and policies of, the schools, hospitals, clinics, and other community agencies in which the hearing handicapped are served.

There was agreement as well with regard to those competencies which the teachers did not value very highly and which the Committee did not consider. Among these was the ability to administer an overall educational program for children with hearing impairments. The Committee report contains no mention of the need for knowledge

of disabilities other than impaired hearing, and knowledges of these other disabilities were given comparatively low ratings by the teachers.

The Committee did not emphasize the competencies needed for counseling the hard of hearing child whereas the teachers rated these items highly. There may be a difference in point of view implied in such evaluation. The Committee may not feel the immediate pressures to counsel which undoubtedly face the teacher.

These evaluations of the two groups reflect not only the different experiences and different professional responsibilities of the members of the study, but also the different frame of reference in which the Committee expressed itself.

SECTION 3

Education and Experience

THE STUDY attempted not only to determine the significance of selected competencies but also to evaluate certain specific professional experiences which might contribute to the development of such competencies. In this section of the report there are presented

1. The teachers' evaluations of certain preparatory experiences.
2. The evaluation of student-teaching experience by teachers and by supervisory and college personnel.
3. The evaluation of teaching experience with normal children by teachers and by supervisory and college personnel.
4. The evaluation of different plans for professional preparation by supervisory and college personnel.

Teachers' Evaluations of Specialized Preparatory Experiences

The teachers evaluated as "very important," "important," "less important," or "not important" a list of practical experiences, typical of those used in preparation of teachers of hard of hearing. The experiences are concerned, in general, with supervised student teaching, planned observations, and experiences in interpreting certain data from tests and records. The results are presented in table 4.¹

The fact that none of these practical experiences was rated as "less important" or "not important" is meaningful to those who conduct programs of professional preparation. The teachers' endorsement of practical experience underscores heavily the need for adequate student-teaching opportunities provided by colleges and universities.

The rating given to supervised teaching in lipreading [1] again stresses the competency considered most important. Although the inquiry form did not provide for an evaluation of supervised practice in speech and hearing clinics, the high importance given to planned

¹ See appendix C for detailed description of the procedures used to place experiences in rank order.

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Table 4.—Relative importance which teachers of hard of hearing children placed on some specific experiences in specialized preparation

| Rank order of importance | Experience |
|------------------------------------|--|
| ITEMS RATED "VERY IMPORTANT" (1-7) | |
| 1 | Supervised student teaching of hard of hearing children in lipreading. |
| 2 | Supervised student teaching of hard of hearing children at the elementary level. |
| *3 | Supervised student teaching of hard of hearing children in speech development and voice improvement. |
| 4 | Planned observation in speech and hearing clinics. |
| *5 | Supervised student teaching of hard of hearing children in language development. |
| 6 | Student observation (without active participation) of teaching of hard of hearing children. |
| 7 | Supervised student teaching of hard of hearing children at the nurse-school level. |
| ITEMS RATED "IMPORTANT" (8-20) | |
| 8 | Experiences in drawing educational interpretations from psychological reports on hard of hearing children. |
| 9 | Supervised student teaching of hard of hearing children at the secondary level. |
| 10 | Planned observation in day classes or schools for hard of hearing children. |
| 11 | Experiences in drawing educational interpretations from cumulative educational records on hard of hearing children. |
| 12 | Experiences in drawing educational interpretations from otologic and other medical reports. |
| 13 | Supervised student teaching of normal children. |
| *14 | Supervised student teaching of hard of hearing children in the academic subjects. |
| 15 | Planned observation of conferences of teachers of the hard of hearing on pupil placement, curriculum adjustment, child study, and so on. |
| 16 | Planned observation of multiprofessional case conferences held by representatives from such fields as medicine, psychology, education, and social welfare, to study and make recommendations on individual hard of hearing children. |
| 17 | Experiences in drawing educational interpretations from reports of social workers on hard of hearing children. |
| 18 | Planned observation in rehabilitation centers for hard of hearing youth and adults. |
| 19 | Planned observation in otological clinics. |
| 20 | Planned observation in residential schools for deaf and hard of hearing children. |

See footnotes at end of table.

Table 4.—Relative importance which teachers of hard of hearing children placed on some specific experiences in specialized preparation—Con.

| Rank order of importance ¹ | Experience |
|---|--|
| ITEMS RATED "IMPORTANT" ² (8-23)—Continued | |
| 21 | Visits to the homes of hard of hearing children in the company of supervising teachers. |
| 22 | Planned observation at nonschool community organizations offering services to the hard of hearing, such as recreation groups, clubs, and community houses. |
| 23 | Planned observation in cerebral palsy clinics. |
| ITEMS RATED "LESS IMPORTANT"—NONE | |
| ITEMS RATED "NOT IMPORTANT"—NONE | |

¹ The rank of each item was determined by the average ratings of importance it received from the participating speech correctionists. See appendix C, p. 57, for detailed information on statistical procedures and results.

² Items were classified into the 4 groups of importance according to their average ratings: "very important," "important," "less important," and "not important." See appendix C, p. 57.

³ Starred (*) items indicate experiences which showed a statistically significant difference between the average rating of importance given by the 57 classroom teachers and the average rating of importance given by 43 itinerant teachers. See appendix C, p. 57, for statistical procedures employed to determine significant differences.

observation in speech and hearing clinics [4] along with the importance of supervised teaching in speech development and voice improvement [3] seems to reflect the importance of supervised clinical practice. Some changes might have occurred in the rating of experiences if the list had been expanded to include supervised teaching in each of the situations now described as planned observations.

The teachers considered experiences in drawing interpretations from various reports and records to be "important" [8, 11, 12, 17]. This evaluation is consistent with the evaluations made of competencies (table 1) in which the ability to *make* such interpretations was rated very highly.

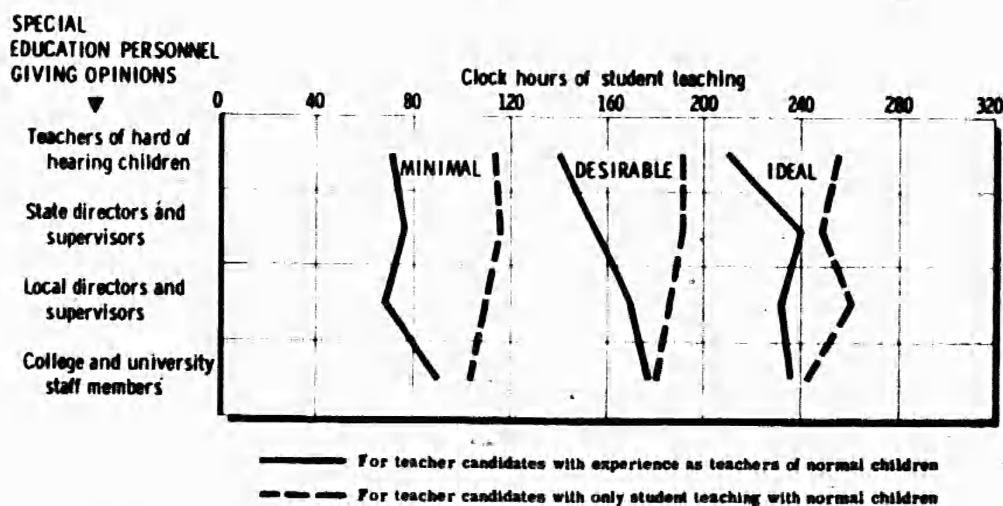
A comparison of the evaluations by itinerant teachers and non-itinerant teachers was made, and in only three instances (starred on table 4) were there significant differences. The itinerant group ranked the experience relative to language development as 10th ("important") while the non-itinerant moved it up to 3rd ("very important"). The non-itinerant group ranked supervised student teaching in academic subjects as 7th ("very important") whereas the itinerant ranked the same item as 20th ("important"). Experience in speech development was placed 1st in importance by non-itinerant teachers and 4th by the itinerant teachers.

Student Teaching With Hard of Hearing Children

The preceding discussion established that specialized student practice teaching was a valuable professional experience. The natural corollary question of "How much time should be spent in student teaching?" was asked of the teachers, the State and local supervisory personnel in special education, and the college staff members. The results are summarized in the graph below. (See appendix C, page 57, for detailed information.)

The results in terms of the hours required for (1) teacher candidates with experience as teachers of normal children, as well as (2) teacher candidates with only student teaching experience with "normal" children may be summarized as follows: The "minimal" amount for candidates with classroom experience was a median value of 70 clock hours in the opinion of the teachers in the study; 76 clock hours was given by State supervisory personnel; 68 clock hours by local supervisory personnel; and 89 by the college instructors. The "desirable" clock hours ranged from 140 to 177, and the "ideal" from 210 to 240.

Opinions of special educators on the amount of student teaching with hard of hearing children needed by those preparing to teach in this area



For the candidates with experience *only* in student teaching with normal children, there is an increase in the number of clock hours required. The "minimal" values range from 104 to 117; the "desirable" clock hours are from 181 to 192; and the "ideal" range from 243 to 261.

Several observations can be drawn from inspection of the graph:
 (1) All the special educators allow a range of required clock hours

from minimal to ideal. This is significant to the college educator who is hard pressed for curriculum time and who must have flexibility in planning his training programs. (2) All of the special educators would allow the teacher with classroom experience to spend less clock hours in specialized student teaching. This, too, is significant to college training directors who face the difficult task of recruiting teachers for the field. The respondents in the study do not urge inflexible standards without regard to certain previously-demonstrated competencies. (3) The graph shows that the teachers consider regular classroom teaching experience to be a more critical factor than do college instructors. Apparently, teachers feel that experience with the normal child is of more importance than do the college instructors. College instructors tend to require nearly the same number of hours of preparation of all student-teachers, regardless of background. This trend is evident in similar graphs for other studies in this series.

Teaching Experience With Normal Children

A somewhat deeper insight into the question of the value of regular classroom experience is afforded by the answers to the questions in this section of the inquiry. Teachers and other personnel were asked to "indicate the amount of successful classroom teaching of so-called normal children which you believe should be 'minimal,' 'desirable,' and 'ideal' prerequisites for a teacher of hard of hearing children." The results are presented in table 5.

What percent of the group felt that no experience was necessary? For the "desirable" and "ideal" prerequisites there was general agreement that some experience was necessary. For the "minimal" prerequisites, there was no agreement: only 5 percent of the teachers, but 28 percent of the college personnel would accept "no experience."

What percent would accept student teaching with normal children as the only experience? For a "minimal" preparation, about half of the special educators accepted only student teaching. For a "desirable" preparation, the percentage of State and local supervisors accepting only student teaching was much less. The percent of teachers who would accept student teaching only was somewhat less, but the percentage of college personnel who made a distinction between "minimal" and "desirable" prerequisites on this basis was almost nil.

At the level of "ideal" prerequisites there was almost general agreement that more preparation than student teaching was necessary. Some of the college group still continued to accept only student teaching.

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Table 5.—Opinions of special educators on the amount of teaching experience with normal children needed by those preparing to teach hard of hearing children

| Teaching experience with normal children | Percent of personnel rating ¹ | | | |
|--|--|-------|-------|---------|
| | Teachers | State | Local | College |
| MINIMAL | | | | |
| None..... | 5 | 9 | 14 | 28 |
| 1 semester, half-time student teaching..... | 34 | 31 | 30 | 52 |
| 1 semester, full-time student teaching..... | 16 | 22 | 17 | 15 |
| 1 year of classroom teaching..... | 28 | 36 | 31 | 5 |
| 2 years of classroom teaching..... | 9 | | 6 | |
| 3 years of classroom teaching..... | 8 | 2 | 1 | |
| More than 3 years of classroom teaching..... | | | 1 | |
| DESIRABLE | | | | |
| None..... | | | | 2 |
| 1 semester, half-time student teaching..... | 4 | 2 | 8 | 24 |
| 1 semester, full-time student teaching..... | 30 | 16 | 16 | 42 |
| 1 year of classroom teaching..... | 21 | 36 | 33 | 25 |
| 2 years of classroom teaching..... | 38 | 41 | 36 | 7 |
| 3 years of classroom teaching..... | 4 | 5 | 7 | |
| More than 3 years of classroom teaching..... | 3 | | | |
| IDEAL | | | | |
| None..... | | | | 2 |
| 1 semester, half-time student teaching..... | | 2 | 2 | 4 |
| 1 semester, full-time student teaching..... | 3 | | 8 | 18 |
| 1 year of classroom teaching..... | 25 | 17 | 17 | 38 |
| 2 years of classroom teaching..... | 37 | 29 | 28 | 24 |
| 3 years of classroom teaching..... | 30 | 50 | 42 | 13 |
| More than 3 years of classroom teaching..... | 5 | 2 | 3 | 2 |

¹ Percents are based on the number answering in each category. Because of rounding off, unit percents do not always add to 100. A total of 304 special educators, all having some responsibility for the education of hard of hearing children, answered the question: 89 teachers, 60 State directors and specialists, 82 local directors and supervisors, and 73 college staff members.

What percent favored the prerequisite of 1-3 years of classroom experience? The college personnel again complicate the making of a generalized statement. For "minimal" preparation, only 5 percent of the college personnel felt that even 1 year was necessary, whereas from 38 percent to 45 percent of the other personnel chose 1 to 3 years of experience teaching normal children.

The break between college personnel and the others is sharp at the "desirable" level, for 63 percent to 82 percent of the noncollege people against 32 percent of the college people favored 1 to 3 years of experience.

At the "ideal" level the pattern is still evident. Of the college personnel, 75 percent chose 1 to 3 years of experience, whereas from 87 percent to 96 percent of the others wanted 1 to 3 years of experience. There was an indication that State and local personnel felt an increasing value for each year of experience up to 3 years. There was general agreement that more than 3 years of teaching experience was not necessary.

Speculation on the reasons for the different weight given by college personnel to teaching experience with normal children would not be profitable. The frame of reference for the college personnel is one which is relative to his task of recruiting and training teachers to the maximum level of competency within certain time limits. The non-college personnel are closer to the everyday problems of working in a total school program and therefore may feel a need for a wider background experience.

Professional Preparation for Teacher Candidates Most Likely To Succeed

What kind of a plan for professional preparation will produce a competent teacher for the hard of hearing child? State and local personnel and college educators were asked to choose the two programs most likely to produce a successful candidate from among six hypothetical programs. The 6 programs were built from a combination of these 6 elements: (1) Student practice teaching, (2) specialized preparation, (3) teaching with normal children, (4) teaching experience with hard of hearing children, (5) a bachelor's degree, and (6) 1 year of graduate study. The six different combinations of the elements were evaluated and the results are presented in table 6.

The program for candidate C was favored by all respondents. This is the longest program, requiring not only academic time up to 1 year of graduate school, but also teaching experience with normal children.

The next most favored combination program, B, was still a 1-year graduate program, but no teaching experience with normal children was required.

Of the remaining programs, E, a bachelor's degree in general education with only student teaching of normal children, and D, which adds to E the teaching experience with normal children, were not favored.

Program A emphasizing specialized preparation at the undergraduate level was preferred by the college personnel over F in which the candidate had teaching experience with normal and hard of hearing children but no specialized preparation. No preference for under-

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Table 6.—Opinions of special educators on combination of professional preparation and experience of teachers most likely to succeed¹

| Symbol | Preparation and experience | Percent of persons selecting each candidate | | | |
|----------------|---|---|-------|-------|---------|
| | | Total | State | Local | College |
| C ¹ | A 1-year graduate program of specialized preparation (including student teaching with the hard of hearing) for experienced regular classroom teachers holding a bachelor's degree in general teacher education; teaching experience with <i>normal</i> children only..... | 78 | 80 | 73 | 82 |
| B | A 1-year graduate program of specialized preparation (including student teaching with the hard of hearing) immediately following the completion of a bachelor's program in general teacher education; no teaching experience with <i>normal</i> or <i>hard of hearing</i> children..... | 43 | 42 | 35 | 52 |
| A | A 4-year undergraduate program of specialized preparation (including student teaching with normal and hard of hearing children); no teaching experience with <i>normal</i> or <i>hard of hearing</i> children..... | 30 | 20 | 28 | 40* |
| F | A bachelor's degree in general teacher education, but no specialized preparation; teaching experience with <i>normal</i> and <i>hard of hearing</i> children..... | 21 | 23 | 28 | 13 |
| D | A bachelor's degree in general teacher education, but no specialized preparation; teaching experience with <i>normal</i> children only..... | 1 | 3 | 1 | |
| E | A bachelor's degree in general teacher education (including student teaching of normal children); no teaching experience with either <i>normal</i> or <i>hard of hearing</i> children..... | 1 | | 2 | |

¹ Percent is based on number of persons responding to the question as a whole and adds to more than 100 since each person was allowed two choices. A total of 234 special educators with some responsibility for the education of children who are hard of hearing gave opinions: 60 directors and specialists in State Departments of Education, 81 directors and supervisors in local school systems, and 93 college staff members.

* Letters refer to candidates as originally listed in the inquiry forms. See appendix D, page 62.

graduate specialized training over experience in teaching hard of hearing children was expressed by the local directors who rated the two programs equally. The State directors of special education preferred to a slight degree the program of general teacher education with experience in teaching both normal and hard of hearing children.

The preference of these special educators for the concept of a "5-year" program is of far reaching significance in such problems as recruiting new teachers and formulating standards for the certification of teachers.

SECTION 4

Summary and Implications

THIS PUBLICATION is a report of the study of the qualifications and preparation of teachers of hard of hearing children. As a means of collecting the data, a committee of leaders in this field were asked to report their considered judgement of the required competencies. In addition, opinions were sought, by means of inquiry forms, from successful teachers of hard of hearing children, from State and local supervisors of special education, and from college instructors who are training teachers of exceptional children.

The data reported from the inquiry forms included: Evaluations by the teachers of the importance of the competencies and their own proficiency in those competencies; evaluation by the teachers of preparatory experiences in professional training; evaluations by all participants in the study of the importance of regular classroom work, and of the need for student teaching; and evaluations by supervisory and college personnel of the kinds of curricular plans most likely to produce successful teachers of children who are hard of hearing.

The data was tabulated, treated statistically, discussed, and compared with other data in order to present a more complete picture of the competencies needed for becoming a teacher of the child who is hard of hearing.

This study, by focusing on competencies, has taken one step forward in studying the qualifications and preparation of teachers of hard of hearing children. Further study and subsequent validation of the results should increasingly promote the goal of improving programs and services for the education of the children with impaired hearing.

According to some general findings of the study, *teachers of hard of hearing children:*

1. Should be primarily specialists in teaching communication skills, particularly the skills of speechreading (lipreading), auditory comprehension, and speech and language development.
2. Should have a sound background in medical, physiological, psychological,

- and physical science with reference to the problems of communication (especially hearing).
3. Are more concerned with general programming and broad curriculum than with specific curriculums. (Although the teacher feels a responsibility for the child's total education, certain specific educational experiences may be the responsibility of other teachers.)
 4. Are less concerned with the importance of equipment, materials, and tests than with the importance of competencies involved in understanding the child.
 5. Must be able to cope effectively with the multifaceted problems of counseling and guiding the child, and cooperating with his parents and other professional persons on whom the child's education rests.
 6. Must be able to work as a close team with other professions and agencies concerned with the hard of hearing child.
 7. Do not feel that it is necessary to be highly competent in other areas of exceptionality.
 8. Need a greater degree of certain personal characteristics for teaching hard of hearing children than for teaching "normal" children.
 9. Consider supervised student teaching in lipreading, speech development, and voice improvement to be of most importance.
 10. Should spend approximately 210 to 260 clock hours in supervised practice for an "ideal" preparation.
 11. Should have at least one year of classroom teaching experience with "normal" children for an "ideal" preparation.
 12. Will be most likely to succeed if the program of professional preparation includes 1 year of graduate study in the specialized field and teaching experience with "normal" children.

An urgent need exists for the further clarification of the special education problems of children with impaired hearing. The kinds of help needed by these children that can, and should, be provided for them within the school program should be more fully identified, and the administrative arrangements under which these kinds of help can most effectively be given need to be determined.

The basic problem to be dealt with in this area is partly that of definition and partly that of research and development. Hearing acuity exists in degree and on a continuum: the categorizing of children as moderately or severely hard of hearing, or as deaf, is, therefore, arbitrary and involves difficult problems of definition, diagnostic testing, and evaluation. These problems are compounded by traditional concepts and by personal, family, and situational factors which, in addition to the degree of hearing loss, must be considered in each case in evaluating the specific needs to be met and in determining the most effective ways of meeting them. The practical difficulties are complicated by the substantial need for additional relevant scientific information, which will form the bases for developing improved educational programs.

Standing out above all other considerations is the fundamental need for objective investigation of the problem of impaired hearing among school children and of the effectiveness of specified methods of teaching children with hearing impairments with and without hearing aids. With respect to any particular method of teaching any specific communication skill, are there children with designated degrees of hearing loss, or are there particular children within specified ranges of hearing impairment, for whom the method is particularly appropriate or inappropriate or even detrimental? On the basis of what criteria may a particular hard of hearing child be assigned to a program of regular classroom instruction, with or without a hearing aid, supplemented by the services of an itinerant hearing specialist, or to a program of instruction under a classroom teacher of the hard of hearing in a special room or school for the hard of hearing? What are the significant variations of each of these general types of program? What is the relative effectiveness of each type of program for specific children, or for identifiable subgroups of hearing-handicapped children? These are among the questions that call for further study.

APPENDIX A

Office of Education Study, Qualification and Preparation of Teachers of Exceptional Children

This broad study on the teachers of exceptional children was undertaken by the Office of Education in collaboration with many leaders in special education from all parts of the Nation, with the special help of the Association for the Aid of Crippled Children of New York City. It was directed by a member of the Office of Education staff, who was counseled by two committees. One was an Office of Education policy committee, whose function it was to assist the director in management and personnel aspects of the study. The other was a national advisory committee of leaders in special education from various parts of the United States; it was the function of this group to help identify the problems, to assist in the development of the design of the study, and to otherwise facilitate the project. The study also had the counsel of a number of consultants who reviewed written material and made suggestions on personnel and procedures. (A complete list of these committee members and consultants appears on pages ii, iii, and iv.)

The general purpose of the study was to learn more about the qualification, distinctive competencies, and specialized preparation needed by teachers of handicapped and gifted pupils. The term "teachers" was interpreted broadly to mean not only classroom instructors of the various types of exceptional children, but also directors and specialists in State and local school systems and professors of special education in colleges and universities. A separate study was made of the qualification and preparation needed by teachers of children who are: (1) blind, (2) crippled, (3) deaf, (4) gifted, (5) hard of hearing, (6) mentally retarded, (7) partially seeing, (8) socially and emotionally maladjusted, (9) speech handicapped, or (10) handicapped by special health conditions such as rheumatic fever. Separate studies were also made of qualification and preparation needed by special education administrative and supervisory personnel in State departments of education (11), and in central offices of local school systems (12). Still another study (13) was made of qualification and preparation needed by instructors in colleges and universities preparing teachers of exceptional children. Thus, incorporated into the broad project were 13 separate studies.

Two techniques were used to gather data on the qualification and preparation needed by special education personnel. One was the use of a series of inquiry forms; the other was the formation of committees to submit statements describing desirable competencies. The plan of the study also provided for conferences whenever practical and possible.

Through the series of inquiry forms, facts and opinions were collected from

superior teachers in each of the 10 areas of exceptionality listed above, as well as from directors and supervisors of special education in State and local school systems and from college instructors of special education. By means of these questionnaires, the 13 groups of special education personnel had opportunity to express their views on the distinctive skills, competencies, and experiences which they consider basic for special educators. Through the inquiry forms, status information was also gathered on State certification requirements for teachers of exceptional children, and on existing teacher-education programs for the preparation of these teachers.

Through the committee technique, reports were prepared on the distinctive competencies required by educators in areas paralleling those studied through inquiry forms. There were 13 such committees in all. The names of these committee members were proposed by the national committee, and the chairmen were appointed by the Commissioner of Education. Insofar as possible, committees were composed of from 6 to 12 leading educators in their areas of interest who had engaged in college teaching, had held supervisory positions in State or local school systems, and had classroom teaching experience with exceptional children.

Three major conferences were called on the study. In September 1952 private agencies interested in gifted and handicapped children met with the Office of Education staff and the national committee. In March 1953 the Commissioner of Education called a 3-day conference on distinctive competencies required by special educators. In October 1954 a week's work conference was convened in Washington, during which time working papers incorporating all data collected were presented, reviewed, and modified. The occasion provided opportunity for a free exchange of views and for analysis and interpretation of data.

The findings from such a study, representing the viewpoint of no single individual or agency, will, it is hoped, contribute effectively toward the goal of increasing the number of educators competent to teach our exceptional children.

APPENDIX B

Information About the 100 Participating Teachers of Children Who Are Hard of Hearing

The design of the study called for at least 100 superior classroom teachers, of hard of hearing children to supply facts and opinions through an extensive inquiry form. An effort was made to secure a representative sampling of superior teachers throughout the Nation by establishing a quota for each State and by providing guidelines for the selection of teachers within each State. State quotas were established with the help of the Educational Statistics Branch of the U.S. Office of Education. Among the factors considered in establishing the quotas were child population and number of pupils enrolled in special education facilities for the hard of hearing in the State.

Guidelines for the selection of superior teachers were prepared with the help of the national advisory committee. They specified: (1) That participants be currently employed as teachers and that they be superior in the opinion of their supervisors; (2) that they have specialized preparation for teaching hard of hearing children; (3) that, insofar as possible, teachers be chosen so that about half of the number would have received their specialized professional preparation before January 1, 1946, and the other half after that date; and (4) that the selection be made as widely as possible from various types of teaching situations, such as urban and rural centers, public and private schools.

In order to obtain at least 100 completed inquiry forms from teachers who would meet the criteria set by the study, it was decided to compile a list of approximately 200 teachers. State departments of education submitted the names and addresses of 184 teachers of hard of hearing children. Inquiry forms were sent to all of these; 123 forms were completed and returned. Twenty-three respondents did not meet the criteria set forth in the guidelines. The forms from the other 100 teachers were collated and data from them are reported in this bulletin.

The reader may want to know something about the school situations in which the 100 participating teachers of the hard of hearing were employed, as well as about their personal qualifications and professional training. Background information is presented here, but should be interpreted with extreme caution. It is not intended that it should have any program implications, since it was not within the scope of this project to study programs for the education of hard of hearing children. This information is presented solely because opinions reported in this bulletin can sometimes be more accurately interpreted in the light of such facts as the school situations in which the contributing teachers were employed, the grade level at which they were working, or their own professional preparation.

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The personal data obtained from the participating teachers indicate that they were a relatively heterogeneous group working in a variety of settings. Of these 100 teachers, 57 were primarily classroom teachers (categories a through d in table A) and 43 were itinerant teachers (category e).

Table A.—Type of school organization in which the participating teachers were working

| Type of organization | Number of teachers |
|--|--------------------|
| TOTAL..... | 100 |
| a. Special day school for various types of handicapped children..... | 11 |
| Special day school for hard of hearing children only..... | 6 |
| b. Single multigrade special class for hard of hearing children in a regular day school..... | 22 |
| c. Center of two or more special classes for hard of hearing children in a regular day school..... | 17 |
| d. State residential school..... | 1 |
| e. Itinerant teacher of the hard of hearing..... | 43 |

Although each of the 100 participants was primarily a teacher of hard of hearing children, a great variety of titles were reported. The 58 classroom teachers represented themselves in the following ways: 13 as teachers of hard of hearing; 6 as teachers of deaf; 7 as teachers of hard of hearing and deaf; 11 as teachers of hearing conservation; 3 as teachers of lipreading or speechreading; 2 as speech correctionists; 2 as speech and hearing therapists; 2 as head teachers; and 1 each as teacher, teacher of hearing conservation and speech correction, teacher of lipreading and auditory training, director of education and recreation (in a local hearing society), primary acoustic teacher, hearing program teacher, speech and hearing teacher, hearing therapist, and teacher of deaf and speech correction.

The 43 itinerant teachers reported their titles as follows: 11 as teachers of lipreading or speechreading; 10 as teachers of lipreading or speechreading and speech therapists or correctionists; 7 as speech and hearing therapists; 2 as hearing therapists; 2 as hearing conservation specialists; 2 as teacher of lipreading and teacher of hard of hearing children; and 1 each as speech therapist, speech and hearing teacher, audiometrist and speech and hearing teacher, teacher of hard of hearing and speech therapist, teacher of hard of hearing, and supervisor of hearing program; 3 did not give this type of information.

Seven of the 57 classroom teachers and 22 of the 43 itinerant teachers classified themselves in part as speech therapist or speech correctionist. Of the classroom teachers, 34, and of the itinerant teachers, 15, or a total of 49, reported that they included deaf children among their pupils.

Of the 100 teachers 94 taught solely or partly at the elementary level, 39 of them included nursery or kindergarten children among their pupils, and 53 included secondary school children in their teaching. (See table B.)

Twenty of the teachers reported that they themselves were hard of hearing and eighty said they had normal hearing. None of the 100 teachers classified himself as deaf.

The major part of their specialized preparation had been received by 60 of the teachers prior to January 1946, and by the other 40 teachers after January

Table B.—Grade levels at which the teachers were working

| Level | Number of teachers | | |
|--|--------------------|-----------|-----------|
| | Total | Itinerant | Classroom |
| TOTAL..... | 100 | 43 | 57 |
| Nursery or kindergarten <i>only</i> | 1 | 0 | 1 |
| Nursery or kindergarten <i>and</i> elementary..... | 16 | 4 | 12 |
| Elementary <i>only</i> | 30 | 3 | 27 |
| Elementary <i>and</i> secondary..... | 28 | 16 | 10 |
| Secondary <i>only</i> | 5 | 2 | 3 |
| Nursery or kindergarten, elementary, <i>and</i> secondary ¹ | 22 | 18 | 4 |

¹ Two of the 22 teachers also taught adults.

1946. About two-thirds received this specialized preparation *prior to*, and about one-third *concurrently with*, teaching hard of hearing children. About half had taught normal children before preparing to teach in this special area. (See table C.) The number who had received preparation at the graduate level was about the same as the number who had received all their preparation at the undergraduate level. (See table D.)

Table C.—Specialized preparation of the participating teachers, by time of preparation

| Time of preparation | Number of teachers |
|--|--------------------|
| TOTAL..... | 100 |
| Before teaching normal children..... | 48 |
| After teaching normal children..... | 52 |
| TOTAL..... | 100 |
| Before teaching hard of hearing children..... | 68 |
| Concurrently with teaching hard of hearing children..... | 32 |

Table D.—Specialized preparation of the participating teachers, by type of program

| Level | Number of teachers |
|---|--------------------|
| TOTAL..... | 100 |
| Graduate..... | 47 |
| Undergraduate..... | 41 |
| A residential school for the deaf and hard of hearing independent of a degree-granting institution..... | 12 |

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The classroom teachers were working in 19 States and the District of Columbia; the itinerant teachers in 15 States. In all, 27 different States from every section of the Nation were represented by teachers of hard of hearing children.

APPENDIX C

Statistical Procedures and Results

Procedures Used in Analyzing Data Reported in Tables 1, 2, and 3

Each of the 96 competencies (knowledges and abilities) listed in table 1 was rated in two ways by the 100 participating teachers. First the teacher checked whether, in his judgment, each item was "very important," "important," "less important," or "not important" in his present position as a teacher of hard of hearing children. Second, he checked whether he considered himself to be "good," "fair," or "not prepared" in each of these competencies.

The *average importance* of each competency was computed by multiplying the number of checks in the "very important" column by 4, those in the "important" column by 3, those in the "less important" column by 2, and those in the "not important" column by 1. The results were added together and divided by the number of checks for that particular item.

The *average proficiency* of the teachers was computed in the same way, using a numerical value of 3.95 for "good," 2.73 for "fair," and 1.52 for "not prepared." These numerical values (converted scores) were used to make possible a comparison between the ratings of importance on a 4-point scale and the ratings of proficiency on a 3-point scale. They were derived as follows: The average rating of importance was found for all the competencies. This average was 3.32. Then the standard deviation was found for this distribution; it was 0.84. Next, the average rating of proficiency was found for all the competencies, by assigning a value of 3 to the checks in the "good" column, 2 to those in the "fair" column, and 1 to those in the "not prepared" column. This average was 2.48. Then the standard deviation was found for this distribution; it was 0.69. The *z*-scores of the second distribution were equaled to the corresponding *z*-scores of the first. For example, the *z*-score for 3 in the distribution of proficiency ratings was found to be $(3 - 2.48) / 0.69$, which equals $+0.75$. Using the standard deviation of the first distribution as a unit, this yields $+0.75 \times 0.84$, or $+0.63$. Adding 0.63 to 3.32, the mean of the first distribution, yields 3.95. This is the converted score assigned to the checks in the "good" column.

A *rank order* of the list of 96 competencies was determined for both the average ratings of importance and the average ratings of proficiency. Consecutive whole numbers were used for ranks even though a few of the items received identical average ratings. This was done so that the rank order number might also serve as an item identification number. The items have been arranged in table 1, page 16, according to the rank order of importance; the rank order of proficiency is indicated by a rank order number in the righthand column. For example, the number 3 appears opposite item 1 in the table. This item was ranked first in importance and third in proficiency. Rank order numbers and the range of average ratings of the 96 competency items within each category of importance are shown below. Tables with the average rating for each competency are available upon request from the Office of Education.

| Category | Range of average ratings | Rank order numbers |
|----------------|--------------------------|--------------------|
| Very important | 3.50-3.95 | 1-44 |
| Important | 2.51-3.47 | 45-91 |
| Less important | 2.26-2.48 | 92-96 |
| Not important | None | None |
| Good | 3.35-3.94 | 1-57 |
| Fair | 2.34-3.30 | 58-96 |
| Not prepared | None | None |

CO-VARIATION BETWEEN RATINGS OF IMPORTANCE AND RATINGS OF PROFICIENCY

The hypothesis that teachers tended to rate themselves most proficient on those competencies which they also rated most important, and less proficient on those they rated less important, was tested statistically. Because a complete analysis did not seem necessary a random sample of 10 competency items was drawn from the list of 96. For each of these items, a "scatter diagram" or "contingency table" was prepared, with the ratings of importance on the X-axis and the proficiency ratings on the Y-axis. The coefficient of contingency for the table was then computed. Where necessary, adjacent categories of importance ratings were combined, in order to avoid low-frequency intervals (the marginal frequency in any row or column was never allowed to fall below 15). This was desirable in order to obtain a fair and stable value of the contingency coefficient. Most of the contingency coefficients were computed from 2 x 2 tables, though two were computed from a 2 x 3, and one from a 3 x 3 table.

The statistical significance of each contingency coefficient was computed using the chi-square technique, with $(s-1)(t-1)$ degrees of freedom, where s = number of intervals on the X-axis, and t = number of intervals on the Y-axis.

For each contingency table, there was computed not only the actual value of C , but also the maximum value of C obtainable from the set of marginal frequencies characterizing the particular contingency table. This maximum was computed by inserting in one (or more) of the cells of the table the highest possible number consonant with the marginal frequencies and a positive relation between X and Y . Because of the small number of degrees of freedom, the numbers to be inserted in the remaining cells of the table were readily determined by reference to the marginal frequencies and the figures in the cell (or cells) already containing the maximum entry. The coefficient of contingency of the table, thus constructed, was calculated in the usual manner. This maximum coefficient of contingency coefficient was calculated from the original or empirical table.

The median coefficient of contingency on the 10 items was 0.35, with a range from 0.06 to 0.65 in a situation where the maximum possible value of the median coefficient of contingency would be 0.64 with a range from 0.49 to 0.78.

STATISTICAL SIGNIFICANCE OF DIFFERENCES BETWEEN AVERAGE RATINGS OF IMPORTANCE AND AVERAGE RATINGS OF PROFICIENCY

To determine the statistical significance of the difference between the average importance rating and the average self-competence rating on an item, the procedure employed was as follows: The difference between the ratings on importance and proficiency ("converted scores") for each teacher was determined ($I_1 - P_1$ through $I_{100} - P_{100}$, where the subscripts 1 and 100 represent the teachers answering

the question). The average difference between the ratings for all teachers was calculated $\left(\frac{\sum D}{N}\right)$; the standard deviation $\left(\sqrt{\frac{\sum D^2}{N} - (M_D)^2}\right)$ and the standard error of the average of the differences $\left(\frac{s_D}{\sqrt{N}}\right)$ were computed; the average difference was expressed in z-score units $\left(\frac{M_D}{s_{M_D}}\right)$ (this is the "critical ratio"). The probability of obtaining a mean difference as large as, or larger than, the observed differences if we continue to take samples of the same size from a zero-difference universe was read from the appropriate table of probabilities. (Reference: Quinn McNemar, *Psychological Statistics*, pages 73-75.) Differences were considered to be significant if the probability of chance occurrence was as little as 0.01 or less.

In the procedure described above, only *paired* ratings were employed; thus, if a teacher rated an item for importance, but failed to make a proficiency rating for the item, it was impossible to determine the difference between importance and proficiency of that teacher for that item. His response to this item was therefore not usable in this calculation. The ratings of *all* teachers were used in obtaining both the averages for importance and for proficiency on which the ranks in table 1 are based.

In the case of items for which the difference between the average importance rating and the average proficiency rating (converted scores) was less than 0.20, no test of statistical significance was employed. It was considered that differences smaller than 0.20 were too small to have any practical significance. Of those items tested, 21 showed a statistically significant difference between ratings of importance and proficiency. These are indicated in table 1, page 16, by the symbol "sd" in the left hand column, and are discussed on page 34.

Procedures Used in Analyzing Data Reported in Table 4

The 100 teachers rated the relative importance of each of 23 experiences by checking whether, in their judgment, it was "very important," "important," "less important," or "not important" to include the experiences in the specialized preparation of teachers of hard of hearing children. The average importance of each experience was computed by multiplying the number of checks in the "very important" column by 4, those in the "important" column by 3, those in the "less important" column by 2, and those in the "not important" column by 1. The results were added together and divided by the number of checks for that particular item.

A rank order of the list of experiences was then determined on the basis of these average ratings of importance. The items have been arranged in table 4 according to this rank order of importance. The rank order numbers and range of average ratings within each category of importance are shown below. Tables with the average rating for each experience are available upon request from the Office of Education.

| Category | Range or average ratings | Rank order numbers |
|---------------------|--------------------------|--------------------|
| Very important..... | 3. 52-3. 80 | 1-7 |
| Important..... | 2. 54-3. 38 | 8-23 |
| Less important..... | None | None |
| Not important..... | None | None |

STATISTICAL PROCEDURE USED TO COMPARE THE OPINIONS OF CLASSROOM AND ITINERANT TEACHERS AND TEACHERS WITH SPECIALIZED PREPARATION PRIOR AND SINCE JANUARY 1, 1946

The 100 inquiry forms were tabulated so that the responses of the 57 classroom teachers could be compared with those of the 43 itinerant teachers, and so that responses of the 60 teachers who had received their specialized preparation prior to January 1, 1946, could be compared with those of the 40 teachers who had received their specialized preparation since that date. Differences in opinion concerning the importance of the items listed in tables 1 and 4 were tested for statistical significance. In each case the method used was the same. For example the average importance rating for the two groups was computed

$(M_1 = \frac{\sum f_1 X_1}{N_1})$ where X_1 represents the ratings of importance of classroom teachers,

and $(M_2 = \frac{\sum f_2 X_2}{N_2})$ where X_2 represents the ratings of importance of itinerant teachers. The estimated standard deviations of the universes of which X_1 and

X_2 scores were samples were computed $(\hat{\sigma}_1 = \sqrt{\frac{\sum f_1 x_1^2}{N_1 - 1}})$ and $(\hat{\sigma}_2 = \sqrt{\frac{\sum f_2 x_2^2}{N_2 - 1}})$; and

the estimate of the standard error of the difference between the averages was determined $(\hat{\sigma}_{M_1 - M_2} = \sqrt{\frac{\hat{\sigma}_1^2}{N_1} + \frac{\hat{\sigma}_2^2}{N_2}})$. The observed difference between the averages

of the two samples $(M_1 - M_2)$ was then expressed in z -score units $(\frac{M_1 - M_2}{\hat{\sigma}_{M_1 - M_2}})$. This

is termed the "critical ratio." The probability of an average difference as large as, or larger than, the observed average difference being obtained if we keep drawing samples of the same size from a zero-difference universe was read from the table of the normal curve, "Proportion of Area Under the Normal Curve Lying More Than a Specified Number of Standard Deviations $(\frac{x}{\sigma})$ from the Mean." Differences were considered to be significant if the probability of chance occurrence was 0.01 or less.

Statistically significant differences between the evaluations of classroom and itinerant teachers were found on 11 competencies in table 1, and 3 experiences in table 4. These items can be identified by an asterisk (*) in the left-hand column of each of these tables. No statistically significant differences were found between the opinions of teachers prepared prior to, and since, January 1, 1946, on any competency in table 1 or experience in table 4. The raw data, tabulated according to the foregoing categories, are on file in the Office of Education.

Additional Information on Professional Preparation

The opinions reported in the graph on page 42 indicate the median number of clock hours of student teaching of hard of hearing children needed by teacher-candidates with regular classroom experience and by teacher-candidates with only student teaching experience with normal children. The detailed information in appendix table E, page 61, is presented so that the reader may note the wide range of opinions expressed by the participants.

Table E.—Opinions of special educators on the number of clock hours of student teaching with hard of hearing children needed by those preparing to teach in this area

| Clock hours | Percent ¹ of personnel checking each amount needed by teacher-candidates with regular classroom experience with normal children | | | | Percent ¹ of personnel checking each amount needed by teacher-candidates with only student teaching of normal children | | | |
|-------------------------------------|--|-------|-------|---------|---|-------|-------|---------|
| | Teachers | State | Local | College | Teachers | State | Local | College |
| MINIMAL | | | | | | | | |
| None..... | 6 | 14 | 4 | 7 | 5 | 8 | | 5 |
| 1-75..... | 48 | 36 | 51 | 38 | 25 | 22 | 25 | 31 |
| 76-150..... | 37 | 28 | 39 | 28 | 37 | 36 | 54 | 37 |
| 151-225..... | 9 | 16 | 4 | 14 | 24 | 20 | 14 | 16 |
| 226-300..... | | 4 | 2 | 19 | 9 | 8 | 7 | 9 |
| Over 300..... | | 2 | | 3 | | 6 | | 2 |
| Number answering ² | 67 | 50 | 69 | 71 | 59 | 50 | 69 | 64 |
| DESIRABLE | | | | | | | | |
| None..... | | | | | | | | |
| 1-75..... | 6 | 20 | 10 | 3 | 5 | 8 | 1 | 4 |
| 76-150..... | 51 | 27 | 25 | 30 | 17 | 15 | 20 | 29 |
| 151-225..... | 36 | 38 | 58 | 48 | 51 | 49 | 59 | 43 |
| 226-300..... | 6 | 13 | 7 | 17 | 25 | 26 | 17 | 22 |
| Over 300..... | | 2 | | 2 | 2 | 2 | 3 | 2 |
| Number answering ² | 61 | 48 | 59 | 63 | 59 | 39 | 71 | 58 |
| IDEAL | | | | | | | | |
| None..... | | | | | | | | |
| 1-75..... | 11 | 4 | 1 | 3 | 2 | | | |
| 76-150..... | 13 | 13 | 6 | 5 | 9 | 11 | 4 | 4 |
| 151-225..... | 33 | 23 | 39 | 35 | 10 | 20 | 8 | 35 |
| 226-300..... | 43 | 49 | 53 | 46 | 72 | 61 | 80 | 48 |
| Over 300..... | | 11 | 1 | 11 | 7 | 8 | 8 | 13 |
| Number answering ² | 67 | 47 | 70 | 57 | 58 | 36 | 52 | 54 |

¹ Percents are based on the number answering in each category. Because of rounding off, unit percents do not always add to 100.

² A total of 219 special educators answered this question as a whole: 57 teachers, 60 directors and specialists in State departments of education, 83 directors and supervisors in local school systems, and 99 college staff members. All had some responsibility for the education of children who are hard of hearing.

APPENDIX D

Excerpts From Inquiry Forms

I. Excerpts From Inquiry Form Filled Out by Teachers of Children Who Are Hard of Hearing

THE OFFICE OF EDUCATION STUDY—"QUALIFICATIONS AND PREPARATION OF TEACHERS OF EXCEPTIONAL CHILDREN"

INQUIRY FORM EXC-4E: For Teachers of Children Who Are Hard of Hearing

- Miss _____
Mrs. _____
- 1.1 Your name Mr. _____ Date _____
- 1.2 Your mailing address _____
City (or Post Office) _____ State _____
- 1.3 Name and location of school in which you teach _____
- 1.4 Indicate the type of school organization in which you teach by checking ONE of the following:
- Special day school for various types of handicapped children
 - Special day school for hard of hearing children only
 - Single multi-grade special class for hard of hearing children in a regular day school
 - Center of two or more special classes for hard of hearing children in a regular day school
 - Itinerant teacher of the hard of hearing
 - Other (Specify): _____
- 1.5 Indicate by filling in the blanks:
- Total number of pupils in your class _____
 - Number of pupils in your class whom you classify as deaf _____
 - Number of pupils in your class whom you classify as hard of hearing _____
- 1.6 Indicate the group or groups of hard of hearing children which you teach by checking ONE or MORE of the following:
- Nursery or Kindergarten Elementary Secondary
- 1.7 Indicate the period in which you took the major part of your specialized preparation which led to your initial certification or approval as a teacher of hard of hearing children by checking ONE of the following:
- Prior to December 31, 1945 Since January 1, 1946

In Published Reports, Opinions Expressed Through This Inquiry Will Not Be Identifiable With the Names of the Persons Completing the Form

1.8 Indicate the plan by which you received the *major* part of your specialized preparation in the education of the hard of hearing:
 (Place ONE check \checkmark in the appropriate square in the table below AND If you have had *additional* preparation by other plans, indicate this by placing X's in ONE OR MORE of the appropriate squares.)

| Type of program | | Prior to on-the-job teaching experience with so-called normal children | | After on-the-job experience with so-called normal children | |
|---|------------|--|---|--|---|
| Program offered at | Level | Prior to teaching hard of hearing children | Concurrently with teaching hard of hearing children | Prior to teaching hard of hearing children | Concurrently with teaching hard of hearing children |
| An accredited ¹ college or university, which consisted largely of work taken during the regular academic year. | Undergrad. | | | | |
| | Grad. | | | | |
| An accredited college or university which consisted largely of summer sessions. | Undergrad. | | | | |
| | Grad. | | | | |
| A residential school for the deaf and hard of hearing independent of a degree-granting institution (therefore <i>without</i> college credit). | | | | | |

Other (Such as inservice program offered by a school or school system, etc.):

¹ An accredited college or university is defined by the Division of Higher Education, Office of Education as an institution certified by the American Association of Colleges for Teacher Education, or by one of the regional Associations of Colleges and Secondary Schools.

1.9 Indicate your auditory acuity by checking \checkmark ONE of the following:
 — Normal hearing — Hard of hearing — Deaf

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3. In your present position as a teacher of the hard of hearing, how important is it that you possess the following competencies?

(Check *✓* ONE of the four columns on the *left* for each item.)

AND

How do you rate your competency at each of the items listed?

(Check *✓* ONE of the three columns on the *right* for each item.)

| Very important | Important | Less important | Not important | Item | Good | Fair | Not prepared |
|----------------|-----------|----------------|---------------|--|------|------|--------------|
| | | | | <p><i>A knowledge and/or understanding of:</i></p> <p>3.1 causes of speech defects, including the relationship of speech and hearing.</p> <p>3.2 the various causes of hearing impairment, such as otosclerosis.</p> <p>3.3 types of hearing loss, such as conductive, perceptual, psychogenic, and their educational implications.</p> <p>3.4 general plans of medical treatment for different types of hearing disabilities such as the fenestration operation, mastoidectomy, radium treatment, etc.</p> <p><i>The ability:</i></p> <p>3.92 to work with vocational rehabilitation agencies in helping the hard of hearing youth toward occupational adjustment.</p> <p>3.93 to establish and maintain good working relationships with other professional personnel such as physicians, psychologists, and social workers.</p> <p>3.94 to read lips (teacher's own ability)</p> <p>3.95 to enunciate clearly and pronounce words correctly (legible lips).</p> <p>3.96 to hear normal speech clearly (with or without a hearing aid).</p> | | | |

All of the items which appear in Table 1 were included in this Question of the Inquiry Form, although not in the same order as in the table.

5. Do you consider the following experiences "very important," "important," "less important," or "not important" in the specialized preparation of teachers of hard of hearing children?

(Check ONE of the four columns on the left for each item.)

| Very important | Important | Less important | Not important | Item |
|----------------|-----------|----------------|---------------|---|
| | | | | 5.1 Supervised student-teaching of so-called normal children. |
| | | | | <i>Supervised student-teaching of hard of hearing children—</i> |
| | | | | 5.2 at the nursery school level. |
| | | | | 5.3 at the elementary level. |
| | | | | 5.4 at the secondary level. |
| | | | | 5.5 in language development. |
| | | | | 5.6 in lipreading (speechreading). |
| | | | | 5.7 in speech development and voice improvement. |
| | | | | 5.8 in the academic subjects. |
| | | | | 5.9 <i>Student-observation</i> (without active participation) of teaching of hard of hearing children. |
| | | | | <i>Planned observation—</i> |
| | | | | 5.10 in speech and hearing clinics. |
| | | | | 5.11 in otological clinics. |
| | | | | 5.12 in rehabilitation centers for hard of hearing youth and adults. |
| | | | | 5.13 in cerebral palsy clinics. |
| | | | | 5.14 in residential schools for deaf and hard of hearing pupils. |
| | | | | 5.15 in day classes or schools for hard of hearing pupils. |
| | | | | 5.16 of multiprofessional case conferences held by representatives from such fields as medical, psychological, educational, and social welfare, to study and make recommendations on individual hard of hearing children. |
| | | | | 5.17 of conferences of on-the-job teachers of the hard of hearing, on pupil placement, curriculum adjustment, child study, etc. |
| | | | | 5.18 at nonschool community organizations offering services to hard of hearing such as recreation groups, clubs, and community houses. |
| | | | | 5.19 Visits to the homes of hard of hearing children in the company of supervising teachers. |
| | | | | <i>Experiences in drawing educational interpretations from—</i> |
| | | | | 5.20 otological and other medical reports. |
| | | | | 5.21 psychological reports on hard of hearing children. |
| | | | | 5.22 reports of social workers on hard of hearing children. |
| | | | | 5.23 cumulative educational records on hard of hearing children. |

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6. Are there personal characteristics needed by a teacher of hard of hearing children which are different in degree or kind from those needed by a teacher of so-called normal children? Yes ___ No ___
 If your answer is "yes," please list and comment. (Attach an additional page if necessary.)

H. Indicate (1) the amount of successful classroom teaching of so-called NORMAL children which you believe should be minimal, desirable, and ideal prerequisites for a teacher of hard of hearing children, and (2) the amount of teaching of so-called normal children which you have had.
 (Place ONE check \checkmark in each column on the right opposite the appropriate amount.)

| Amount of teaching of so-called normal children as a prerequisite for teaching hard of hearing children | Minimal | Desirable | Ideal | Amount which you have had |
|---|---------|-----------|-------|---------------------------|
| No teaching of normal children | | | | |
| At least 1 semester of half-time student-teaching with normal children (or equivalent) | | | | |
| At least 1 semester of full-time student-teaching with normal children (or equivalent) | | | | |
| At least 1 year of on-the-job classroom teaching with normal children | | | | |
| At least 2 years of on-the-job classroom teaching with normal children | | | | |
| At least 3 years of on-the-job classroom teaching with normal children | | | | |
| Other (specify) | | | | |

12. Indicate (1) the amount of student-teaching with hard of hearing children that you believe should be minimal, desirable, and ideal prerequisites for a teacher of the hard of hearing, and (2) the amount of student-teaching of hard of hearing children which you have had.
 (Place ONE check \checkmark in each column on the right opposite the appropriate amount.)

| Amount of student-teaching of hard of hearing children needed as a prerequisite for on-the-job teaching of hard of hearing children | For experienced regular classroom teachers | | | For teacher-candidates with only student-teaching of so-called normal children | | | Amount which you have had |
|---|--|-----------|-------|--|-----------|-------|---------------------------|
| | Minimal | Desirable | Ideal | Minimal | Desirable | Ideal | |
| No student-teaching of hard of hearing children | | | | | | | |
| 1-75 clock hours | | | | | | | |
| 76-150 clock hours | | | | | | | |
| 151-225 clock hours | | | | | | | |
| 226-300 clock hours | | | | | | | |
| Other (specify) | | | | | | | |

II. Excerpts From Inquiry Forms Filled Out by (a) Directors and Specialists in State Departments of Education, (b) Directors and Supervisors in Local School Systems, and (c) Instructors in Colleges and Universities Offering Specialized Preparation for Teachers of the Hard of Hearing

THE OFFICE OF EDUCATION STUDY—"QUALIFICATIONS AND PREPARATION OF TEACHERS OF EXCEPTIONAL CHILDREN"

INQUIRY FORM EXC-1: For Special Education Personnel (including Directors, Supervisors, Consultants, and Coordinators) in State Education Departments

INQUIRY FORM EXC-2: For Directors, Coordinators, Consultants, and Supervisors of Special Education in Local School Systems

Miss
Mrs.

- 1.1 Your name Mr. _____ Date _____
- 1.2 Your business address _____
City (or Post Office) _____ State _____
- 1.3 Your official title _____
(Specify—Supervisor of teachers of crippled children, etc.)
- 1.4 In which area or areas of Special Education do you have responsibility?
(Check as many as are applicable.)
- | | | |
|-----------------------------------|--|---|
| <input type="checkbox"/> Blind | <input type="checkbox"/> Hard of Hearing | <input type="checkbox"/> Spec. Health |
| <input type="checkbox"/> Crippled | <input type="checkbox"/> Mentally Retarded | <input type="checkbox"/> Probs. |
| <input type="checkbox"/> Deaf | <input type="checkbox"/> Partially Seeing | <input type="checkbox"/> Speech Defective |
| <input type="checkbox"/> Gifted | <input type="checkbox"/> Soc. Maladjusted | |

INQUIRY FORM EXC-2A: To Be Filled Out by All Staff Members of Colleges and Universities Who Participate in the Specialized Preparation of Teachers of Exceptional Children

Miss
Mrs.

- 1.1 Your name Mr. _____ Date _____
- 1.2 Official Position _____
(Specify—Director of Special Education, Demonstration Teacher, etc.)
- 1.3 Official Title _____
(Specify—Associate Professor, Graduate Assistant, etc.)
- 1.4 College or University _____ City _____ State _____

See footnotes on page 68.

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16 In which area or areas of Special Education do you have *direct* administrative, instructional, and supervisory responsibilities? (Check as many as applicable.)

- | | | |
|--|--|--|
| <input type="checkbox"/> Blind | <input type="checkbox"/> Hard of Hearing | <input type="checkbox"/> Spec. Health |
| <input type="checkbox"/> Crippled ¹ | <input type="checkbox"/> Mentally Retarded | <input type="checkbox"/> Probs. ² |
| <input type="checkbox"/> Deaf | <input type="checkbox"/> Partially Seeing | <input type="checkbox"/> Speech Defective |
| <input type="checkbox"/> Gifted | <input type="checkbox"/> Soc. Maladjusted ³ | |

In Published Reports, Opinions Expressed Through This Inquiry Form Will Not Be Identifiable With the Names of the Persons Completing the Form.

Throughout the inquiry form:

- ¹ The term "crippled" includes the cerebral paised.
- ² The term "socially maladjusted" includes the emotionally disturbed.
- ³ The term "special health problems" includes children with cardiac conditions, tuberculosis, epilepsy and below-par conditions.

(Completed by State, Local, and College Personnel)

| Item | Blind | Crippled | Deaf | Gifted | Hard of Hearing | Mentally Retarded | Partially Seeing | Soc. Maladjusted | Spec. Health Probs. | Speech Defective |
|---|-------|----------|------|--------|-----------------|-------------------|------------------|------------------|---------------------|------------------|
| 5. Please complete the following table: | | | | | | | | | | |
| 5.1 Indicate the amount of successful classroom teaching with so-called <i>normal</i> children that you believe should be MINIMAL , DESIRABLE , and IDEAL prerequisites for a special education teacher-candidate. Answer by areas, by placing one of three letters (M, D, and I) in each column you complete according to the following key: | | | | | | | | | | |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> M...minimal D...desirable I...ideal </div> | | | | | | | | | | |
| 5.11 No teaching of normal children | | | | | | | | | | |
| 5.12 At least one semester of half-time student-teaching with normal children (or equivalent) | | | | | | | | | | |
| 5.13 At least one semester of full-time student-teaching with normal children (or equivalent) | | | | | | | | | | |
| 5.14 At least 1 year of on-the-job classroom teaching with normal children | | | | | | | | | | |
| 5.15 At least 2 years of on-the-job classroom teaching with normal children | | | | | | | | | | |
| 5.16 At least 3 years of on-the-job classroom teaching with normal children | | | | | | | | | | |
| 5.17 Other (specify) | | | | | | | | | | |

| Item | Blind | Crippled | Deaf | Gifted | Hard of Hearing | Mentally Retarded | Partially Seeing | Soc. Maladjusted | Spec. Health Probs. | Speech Defective |
|--|-------|----------|------|--------|-----------------|-------------------|------------------|------------------|---------------------|------------------|
| 5.2 Indicate the amount of student-teaching with <i>exceptional children</i> which you believe should be MINIMAL, DESIRABLE, and IDEAL prerequisites for a special education teacher-candidate who is a successful regular classroom teacher. (Use the M, D, and I key as in item 5.1.) | | | | | | | | | | |
| No student-teaching in the specialized area | | | | | | | | | | |
| 1-75 clock hours | | | | | | | | | | |
| 76-150 clock hours | | | | | | | | | | |
| 151-225 clock hours | | | | | | | | | | |
| 226-300 clock hours | | | | | | | | | | |
| Other (specify) | | | | | | | | | | |
| 5.3 Indicate the amount of student-teaching with <i>exceptional children</i> which you believe should be MINIMAL, DESIRABLE, and IDEAL prerequisites for a special education teacher-candidate who has <i>only student-teaching with normal children</i> . (Use the M, D, and I key as in item 5.1.) | | | | | | | | | | |
| No student-teaching in the specialized area | | | | | | | | | | |
| 1-75 clock hours | | | | | | | | | | |
| 76-150 clock hours | | | | | | | | | | |
| 151-225 clock hours | | | | | | | | | | |
| 226-330 clock hours | | | | | | | | | | |
| Other (specify) | | | | | | | | | | |

1 semester hour = 15 clock hours.
 1 quarter hour = 10 clock hours.
 1 academic year = 450 clock hours.

6. (Completed by State, Local, and College Personnel.)
 Below are the qualifications of six candidates for positions as teachers of exceptional children. In your opinion which two would be the *most likely* to succeed? (Assume the personality and physical characteristics of the candidates and the calibre of professional preparation to be comparable.)
 Answer, by areas, by placing *two* "M's" in each column you complete, according to the following key:

M = Most likely to succeed

(We realize the items below are not easy to analyze, but your reaction to this question is extremely important, so please give the items your best consideration.)

| Item | Blind | Crippled | Deaf | Gifted | Hard of Hearing | Mentally Retarded | Partially Seeing | Soc. Maladjusted | Spec. Health Probs. | Speech Defective |
|--|-------|----------|------|--------|-----------------|-------------------|------------------|------------------|---------------------|------------------|
| <i>CANDIDATE A: A four-year undergraduate program completed of specialized preparation (including student-teaching with normal and exceptional children) but without on-the-job teaching experience with normal or exceptional children.</i> | | | | | | | | | | |
| <i>CANDIDATE B: A one-year graduate program completed of specialized preparation (including student-teaching in the specialized area) immediately following the completion of a bachelor's program in general teacher education, but without on-the-job teaching experience with normal or exceptional children.</i> | | | | | | | | | | |
| <i>CANDIDATE C: A one-year graduate program completed of specialized preparation (including student-teaching in the specialized area), for experienced regular classroom teachers holding a bachelor's degree in general teacher education, and with on-the-job teaching experience with normal children only.</i> | | | | | | | | | | |
| <i>CANDIDATE D: No specialized teacher preparation but holding a bachelor's degree in general teacher education; no teaching experience with exceptional children, but having teaching experience with normal children.</i> | | | | | | | | | | |
| <i>CANDIDATE E: No specialized teacher preparation but holding a bachelor's degree in general teacher education (including student-teaching with normal children), but without on-the-job teaching experience with normal or exceptional children.</i> | | | | | | | | | | |
| <i>CANDIDATE F: No specialized teacher preparation at a college or university but holding a bachelor's degree in general teacher education; and with on-the-job teaching experience both with normal and with exceptional children in the specialized area.</i> | | | | | | | | | | |