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Speech Correctionists: The Competencies They Need For The Work They Do

*A Report Based on Findings from the Study
Qualification and Preparation of Teachers of Exceptional Children*

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Qualification and Preparation of Teachers of Exceptional Children

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Foreword

THIS PUBLICATION is one of a series resulting from the broad study, *Qualification and Preparation of Teachers of Exceptional Children*, which since 1952 has been one of the major projects of the Office of Education. The participation of more than 2,000 persons concerned with handicapped and gifted children is an example of cooperative action among private organizations, school systems, colleges and universities, and the staff of the Office of Education.

Reported here is that part of the information from the broad study which has particular bearing on the qualification and preparation of speech correction teachers. Opinions of speech correctionists and teachers of children who are hard of hearing were collected separately, but with the current trend towards combining the fields of speech and hearing, the forthcoming report, *Teachers of Children Who Are Hard of Hearing*, may also be of value in this area.

It is hoped that this publication will prove useful to speech correction teachers in their professional development, to supervisors and administrators of speech correction programs, to standard-setting agencies, and to colleges and universities offering preparation for such teachers. Further, it is hoped that this report will stimulate additional discussion and research on the part of those interested in improving instruction for the Nation's children who have speech defects.

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The Problem and the Challenge of More than a Million Speech Handicapped School Children

CHILDREN with speech disorders comprise our largest single group of handicapped school children. It is estimated that 2 to 5 percent of children and youth 5 to 20 years of age have speech disorders sufficiently severe to interfere with their educational, social, and emotional adjustment.¹ While more and more is being done to meet their special needs, not more than one-fifth of the speech handicapped pupils in the Nation's schools are receiving remedial speech instruction, and many of those who are receiving such instruction are not having their needs fully met. The number of children served through speech correction programs in the United States increased from 182,308 in 1947-48 to 306,747 in 1952-53—an increase of 68.3 percent, substantially greater than the 17.4 percent increase in total public school enrollment for the same period. During the same interval the number of public school speech correction teachers increased approximately 80 percent from 1,256 to 2,256.² The number of speech correctionists employed in elementary and secondary schools in 1952-53 was not more than 15 percent of the total number needed, however; and it was far from filling the active demand, estimated to be 15,000 to 18,000.³

¹Report of the American Speech and Hearing Association Committee on the Mid-Century White House Conference, *Speech Disorders and Speech Correction*, *Journal of Speech and Hearing Disorders*, 17:129-137 (June) 1952.

²Mabel C. Rice and Arthur S. Hill; *Biennial Survey of Education in the United States, 1952-54*, Chapter V, *Statistics of Special Education for Exceptional Children, 1952-53*, (Washington, U.S. Government Printing Office, 1954), p. 8 and 15.

³Report of the American Speech and Hearing Association Committee on the Mid-Century White House Conference, *op. cit.*

In 1953-54, 29 States and the District of Columbia had established certification requirements for speech correctionists.⁴ One hundred twenty-two colleges at the same time were offering teacher training programs in one or more areas of exceptionality; 115 were providing training for speech correctionists, more than were providing preparatory programs for teachers in any other area.⁵ Supervisors and college instructors in special education reported that the greatest demand was for teachers of the mentally retarded, and for speech correctionists.

Clearly, the need for speech correction in our schools is urgent; if the need is to be met with increasing effectiveness the problem must be continuously studied, and current thinking and practice must be evaluated for improvement.

The key person in this situation is the speech correction teacher. More than a million speech handicapped children in the schools of the United States need the services of speech correctionists, and in recognizing the needs of these children we are pointing to the necessity for a greatly increased number of speech correctionists.

What does this mean? What is involved in training a worker in this field? An opportunity to define and raise standards is afforded by the attempt to provide the several thousand additional workers for children with speech disorders. What should a speech correction teacher know, or be able to do? What, in brief, are the distinctive competencies needed by speech correctionists working in the elementary and secondary schools, and how may these competencies be acquired?

Information required to answer these questions was obtained in this study by several methods. One of these involved evaluations made by working speech correctionists of the importance to them of each of 86 competencies. Another method involved the writing of a report by 10 prominent leaders in the field of speech correction who served as members of a Competency Committee.

The sample of speech correction teachers was provided through State departments of education on the basis of certain criteria. Each participant had undergone professional preparation, and was judged by administrative supervisors as a superior speech correction teacher. All of the 120 speech correction teachers who participated in the study were working in elementary and secondary schools. Forty had received their specialized preparation before January 1, 1946, and 80 since that date.⁶ Since it was not within the scope of this broad project to study personnel other than educators, speech correctionists working in hospitals and clinics are not included.

⁴Romaine P. Mackie and Lloyd M. Dunn, *State Certification Requirements for Teachers of Exceptional Children*, (Washington, U.S. Government Printing Office, Office of Education, Bulletin 1954, No. 1), p. 8.

⁵Romaine P. Mackie and Lloyd M. Dunn, *College and University Programs for the Preparation of Teachers of Exceptional Children*, (Washington, U.S. Government Printing Office, Office of Education Bulletin 1954, No. 15).

⁶Additional information concerning the participating speech correctionists is presented in Appendix B, page 57.

In the complete investigation of which this study is a part,⁷ teachers of the speech handicapped were differentiated from teachers of the deaf and of the hard of hearing. Because of the trend toward one person serving both the speech and hearing handicapped, it is suggested that the forthcoming report on Teachers of Children Who Are Hard of Hearing be reviewed in connection with this report. The 120 speech correctionists reported that they spend an average of 6 percent of their time with hard of hearing children; only 25 stated that they spent *no* time with such children. The mean proportion of case load made up of children with impaired hearing was 5 percent.

In addition to the judgments on the importance of competencies supplied by the 120 speech correctionists and the 10 professional leaders, information was provided by the speech correctionists about their own professional preparation. The speech correctionists also evaluated their own proficiency with respect to each of the 86 competencies. Special education directors and supervisors (155) at State and local levels evaluated certain types of competence of recently trained speech correctionists working in their school programs. Finally, the speech correctionists evaluated the relative importance of some practical experiences in the professional preparation of speech correction teachers.⁸

The report of this study is presented with the hope that it will be of value—and of considerable interest—to speech correction teachers, their supervisors, school administrators responsible for their programs, and college and university instructors engaged in the professional training of speech correctionists. It is a further hope that students in training courses might benefit from a thoughtful reading of this report.

The value and importance of the current professional thinking reflected in these pages will increase in proportion to its stimulation of further thinking and continued improvement and expansion of the remedial services urgently needed by the million or more speech handicapped children in our Nation's schools.

⁷The general plan of the broad study is described in Appendix A, page 55.

⁸Excerpts from the inquiry forms used to collect information for this report are reproduced in Appendix D, pages 66 to 77.

Competencies Needed
by
Speech Correction Teachers

WHAT COMPETENCIES—knowledges, understandings, and abilities—do speech correctionists need? Are some more important than others? Are there distinctive and specialized knowledges and skills needed by speech correctionists?

In recognition of the basic importance of these questions and the difficulties in securing answers to them, two different methods were used to attain substantial dependability and usefulness. One of these methods involved the preparation of a list of 86 competencies by the Office of Education study staff working with a number of nationally recognized specialists concerned with various aspects of speech correction. By means of inquiry forms, each of 120 speech correctionists rated each of these items as "very important," "important," "less important," or "not important" to him "in his present position." The 86 competencies, arranged in rank order of importance according to the average ratings of the speech correctionists, are listed in Table 1.

These 86 competencies have been grouped as knowledges and abilities having to do with (1) speech correction techniques; (2) classroom teaching, psychology, and child development; (3) motivation and establishment of rapport with the child; (4) use of pertinent test findings, records, and case histories; (5) planning and developing a speech correction program; (6) cooperation with others concerned with the welfare and education of the child; and (7) knowledge of basic sciences, professional literature, and research.

EVALUATIONS MADE BY SPEECH CORRECTIONISTS OF THE IMPORTANCE OF SPECIFIC COMPETENCIES

The competencies rated as "very important" were distributed throughout all seven categories, a fact which indicates that, in the judgment of speech correctionists themselves, the work definitely requires a rather wide range of knowledge and ability. None of the 86 competencies was given an average rating classifying it as "not important" and only 9 were placed in the "less important" category; 46 were classified, on the basis of average ratings, as "important," and 31 as "very important."

In the ensuing discussion of the ranks assigned the various knowledges and abilities under the specialized categories, the reader should keep in mind that 77 of the 86 competencies were classified as "very important" or "important." The numbers interspersed in brackets refer to the rank orders of the competencies discussed.

Speech Correction Techniques

Of those competencies most directly concerned with speech correction as such, those involved in working with speech disorders were accorded somewhat higher ratings, on the whole, than those relating to work with impaired hearing.



Los Angeles City Schools

Much of speech correction is best done with small groups.

This is to be interpreted with reference to the fact that only 5 percent of the case load of the participating teachers were children who were hard of hearing; the remaining 95 percent being normally hearing children with impaired speech. The teachers did rate the ability to provide auditory training experience for pupils with speech and hearing problems high in the "important" list [36];¹ the ability to teach lipreading, while accorded a lower rating [69], was also evaluated as "important." Indeed, most of the items having to do with hearing problems were classified on the basis of average ratings as "important." [44, 64, 66, 71, 75 & 76.]

Table 1.—Relative Importance Which 120 Speech Correctionists
Attributed to Each of 86 Competencies

Rank order of importance ¹	COMPETENCIES	Rank order of proficiency ²
Competencies rated VERY IMPORTANT ¹ (1 - 31)		
1	A knowledge and understanding of different types of speech handicaps, i.e., functional, articulation disorders, stuttering, voice problems, delayed speech, organic speech disorders.	8
2	The ability — to develop a teaching atmosphere free from pressure and conducive to good mental health;	4
3	to help parents understand their child's speech problems and personal attitudes;	15 ^{sd}
4	to carry on a speech correction program at the elementary level.	11
5	A knowledge or understanding of how the child grows and develops physically, emotionally, socially, and intellectually.	26 ^{sd}
6	The ability — to serve as consultant on speech correction to regular classroom teachers;	6

See footnotes at end of table.

¹In each case the number in brackets refers to the rank order of importance in Table 1.

COMPETENCIES NEEDED

Table 1.—Relative Importance Which 120 Speech Correctionists
Attributed to Each of 86 Competencies—Continued

Rank order of importance ¹	COMPETENCIES	Rank order of proficiency ²
Competencies rated VERY IMPORTANT ³ (1 - 31)—Continued		
7	to inspire pupils with speech handicaps to self-education for overcoming their difficulties;	20 nd
8	to enunciate clearly and pronounce words correctly;	5
9	to plan an effective speech correction schedule involving several schools which is acceptable to pupils, classroom teachers, and parents.	12
10	A knowledge or understanding of currently accepted speech correction practices for the various types of speech defects.	17
11	The ability — to administer to pupils individual diagnostic speech tests;	2
12	The ability — to work as a member of a team with other professional workers such as classroom teachers, psychologists, physicians, and social workers;	14
13	to recognize need for referral of a pupil with a speech disorder to medical, educational, recreational, and other specialists in the school system.	3
14	A knowledge or understanding of current information on causes (emotional and physical) of various types of speech handicaps.	24 th
15	The ability — to hear normal speech clearly.	1
16	A knowledge or understanding of the relationship of a speech correction program to the total program of the school.	10

See footnotes at end of table.

Table 1.—Relative Importance Which 120 Speech Correctionists
Attributed to Each of 86 Competencies—Continued

Rank order of importance ¹	COMPETENCIES	Rank order of proficiency ²
Competencies rated VERY IMPORTANT ³ (1 - 31)—Continued		
17	The ability — to improvise and to be resourceful in selecting materials and activities for speech correc- tion;	16
18	to interpret diagnostic speech and hearing tests and the findings of specialists to classroom teachers and parents, so that appropriate activities can be planned;	20
19	to aid parents in obtaining medical advice and care for children with speech and hearing problems.	21
20	A knowledge or understanding of survey and re- ferral procedures which aid in finding pupils with speech defects.	7
21	The ability — to select and utilize supplies and equipment intelligently;	18
22	to make a survey of the school system for pupils with speech handicaps through a plan acceptable to the particular situa- tion, school, or community;	13
23	to cooperate in developing for each pupil with a speech or hearing problem an educational program which is a total continuous process involving the parents, regular school personnel, and the speech correctionists;	31sd
24	to gain cooperation of school administrators in providing satisfactory teaching accom- modations for the speech correction pro- gram;	28
25	A knowledge or understanding of the — dynamics of human adjustment.	48sd

See footnotes at end of table.

Table 1.—Relative Importance Which 120 Speech Correctionists Attributed to Each of 86 Competencies—Continued

Rank order of importance ¹	COMPETENCIES	Rank order of proficiency ²
Competencies rated VERY IMPORTANT ³ (1 - 31)—Continued		
26	terminology related to speech correction.	9
27	services rendered the speech handicapped by non-medical specialists, i.e., psychologists, social workers, reading specialists, counselors.	32
28	anatomy and physiology of the speech mechanism;	25
29	services rendered by such medical specialists as physicians, pediatricians, endocrinologists, neurologists, otologists, otolaryngologists, oral surgeons, psychiatrists, orthodontists.	58 ^{ad}
30	The ability — to contribute to community leadership in establishing, developing and interpreting the speech-correction program to the general public;	40
31	to make interpretations from information supplied by otologists, otolaryngologists, oral surgeons, orthodontists, and other medical specialists.	47 ^{ad}
Competencies rated IMPORTANT (32 - 77)		
32	A knowledge or understanding of locations of and services offered by local non-school agencies and clinics serving the speech handicapped.	30
33	The ability — to cooperate in selecting activities in the regular school program which can be utilized for speech-correction purposes;	39
34	to make interpretations from psychological reports;	52

¹ See footnotes at end of table.

Table 1.—Relative Importance Which 120 Speech Correctionists
Attributed to Each of 86 Competencies—Continued

Rank order of importance ¹	COMPETENCIES	Rank order of proficiency ²
Competencies rated IMPORTANT (32 - 77)—Continued		
35	to counsel pupils with speech problems regarding their social and emotional problems;	44
36	to provide auditory training experience for pupils with speech and hearing problems;	49
37	A knowledge or understanding of classroom teaching methods at the elementary level.	38
38	A knowledge or understanding of — the diagnosis and general plan of medical treatment of those speech disorders having physical bases;	71 ^{sd}
39	types, sources of procurement, and uses of special supplies and equipment for teaching the speech handicapped;	42
40	the phonetic structure of the English language.	22 ^{sd}
41	The ability — to operate tape and other types of voice recorders;	19 ^{sd}
42	to provide play experience as a therapeutic measure.	46
43	A knowledge or understanding of — reference materials and professional literature on the education and general care of the speech handicapped;	35
44	terminology related to the hard of hearing.	50
45	the locations of, and services offered by national organizations concerned with the education or general welfare of the speech handicapped, such as the International Council for Exceptional Children, American Speech and Hearing Association, and the American Hearing Society.	45

See footnotes at end of table.

Table 1.—Relative Importance Which 120 Speech Correctionists
Attributed to Each of 86 Competencies—Continued

Rank order of importance ¹	COMPETENCIES	Rank order of proficiency ²
Competencies rated IMPORTANT (32 - 77)—Continued		
46	The ability — to make interpretations from audiograms.	57
47	to counsel pupils with speech problems regard- ing their potentials and limitations.	51
48	to carry on a speech correction program at both the elementary and secondary levels.	34
49	A knowledge or understanding of the findings of research studies which have bearing on the education, rehabilitation, psychology, and social status of the speech handicapped.	65ed
50	The ability to make interpretations from the re- ports of social workers.	33
51	A knowledge or understanding of the anatomy and physiology of the hearing mechanisms.	55
52	The ability to carry on a speech correction program at the secondary level.	43
53	A knowledge or understanding of — philosophical concepts underlying present day education;	36ed
54	the needs, characteristics, and general plan of education for various types of exceptional children, such as the mentally retarded and crippled.	66ed
55✓	The ability — to provide intensive psychotherapy when indicated, such as with the child who stutters;	78ed
56	to work with normal children in helping them accept pupils with speech problems;	37ed

See footnotes at end of table.

Table 1.—Relative Importance Which 120 Speech Correctionists
Attributed to Each of 86 Competencies—Continued

Rank order of importance ¹	Competencies rated IMPORTANT—Continued .	Rank order of proficiency ¹
Competencies rated IMPORTANT (32 - 77)—Continued		
57	to review and write reports and case histories of children with speech handicaps;	27 ^{sd}
58	to administer screening tests of hearing.	55
59	A knowledge or understanding of — terminology related to clinical psychology.	73 ^{sd}
60	the psychotherapeutic techniques.	81 ^{sd}
61	The ability — to counsel pupils with speech problems re- garding their educational and vocational problems.	54
62	to administer pure-tone audiometric tests.	56
63	A knowledge or understanding of present-day con- troversial issues in speech correction.	62
64	A knowledge or understanding of various causes of hearing impairment, such as otosclerosis.	69
65	The ability to administer speech-hearing tests.	68
66	A knowledge or understanding of — the effective use of classroom lighting in lip- reading;	64
67	various types of organization for speech correction programs in schools, hospitals, and clinics;	60
68	classroom teaching methods at the nursery and kindergarten levels.	72
69	The ability to teach lipreading (speechreading).	74
70	A knowledge or understanding of — the grammatical structure of the English language.	23 ^{sd}

¹ See footnotes at end of table.

Table 1.—Relative Importance Which 120 Speech Correctionists
Attributed to Each of 86 Competencies—Continued

Rank order of importance ¹	COMPETENCIES	Rank order of proficiency ²
Competencies rated IMPORTANT (32 - 77)—Continued		
71	the different techniques of lipreading.	76
72	the organization and operation of public school systems;	59 ^{ed}
73	classroom teaching methods at the secondary level.	70
74	The ability to work with architects and school administrators in planning and securing special equipment and housing facilities for speech correction programs.	75
75	A knowledge or understanding of the diagnosis and general plan of medical treatment for different types of hearing impairment.	79 ^{ed}
76	The ability — to operate and use amplifiers, group-hearing aids, auditory-training units and other audio-aids;	80
77	to use the International phoetic system.	41 ^{ed}
Competencies rated LESS IMPORTANT (78 - 86)		
78	The ability to teach pupils choral speaking, ⁹ public speaking, puppetry, dramatics, and other aspects of a general speech program.	61 ^{ed}
79	A knowledge or understanding of the physics of sound, including fundamental concepts of acoustics.	82
80	The ability — to operate and use filmstrip and motion-picture projectors and other visual aids;	77 ^{ed}
81	to read lips (teacher's own ability).	83 ^{ed}

¹ See footnotes at end of table.

Table 1.—Relative Importance Which 120 Speech Correctionists
Attributed to Each of 86 Competencies—Continued

Rank order of importance ¹	COMPETENCIES	Rank order of proficiency ²
Competencies rated LESS IMPORTANT (78 - 86)—Continued		
82	to give first aid to hearing aids (day-to-day servicing);	86 ^{sd}
83	to use diacritical marks.....	67 ^{sd}
84	to serve as a regular classroom teacher.....	63 ^{sd}
85	to direct a rhythm band.....	85 ^{sd}
86	to play a piano.....	84 ^{sd}
Items rated NOT IMPORTANT — None		

¹Rank 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, page 61, for statistical procedures used.

²When the inquiry form was sent to teachers, they were also 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 1-51, "fair" on 52-85, and "not prepared" on number 86.

³Items were classified into the four groups of importance according to their average ratings: "very important," "important," less important, and "not important." See Appendix C, page 60.

⁴^{sd} denotes "significant difference." For all items marked with this symbol, analysis 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 page 33. See Appendix C, page 62, for statistical procedures employed to determine significant difference.

The top ranking item having to do with speech correction procedures was a knowledge and understanding of different types of speech handicaps [1]. Rated as "very important" also was a knowledge of currently accepted speech correction practices for the various types of speech defects [10] and the ability to administer to pupils individual diagnostic speech tests [11]. The speech correctionists implied that the quality and efficiency of their work is increased by their ability to select specific supplies and equipment for teaching the speech handicapped [21 and 39] and the ability to use voice recorders [41].

Classroom Teaching and Child Development

It is of particular interest that greater value was placed on a knowledge of child development [5] and personality adjustment [25] than on the ability to provide counseling [35, 47, 61] or psychotherapy [55] or even knowledge about psychotherapeutic methods [60]. It is also to be noted that the speech correction teachers placed a knowledge of present-day education [53] about half way down the list in importance "in their present positions" and gave the third from the lowest rating to the ability to serve as a regular classroom teacher [84]. They placed relatively more importance on understanding classroom teaching methods at the elementary level [37] than at the kindergarten [68] or the secondary [73] level. They gave next to the highest rating, nevertheless, to the ability to develop a teaching atmosphere free from pressure and conducive to good mental health [2]. They gave a relatively low rating to the ability to teach general speech [78].

A moderately high rating was given to understanding the needs, characteristics and general plan of education programs for other types of exceptional children [54].

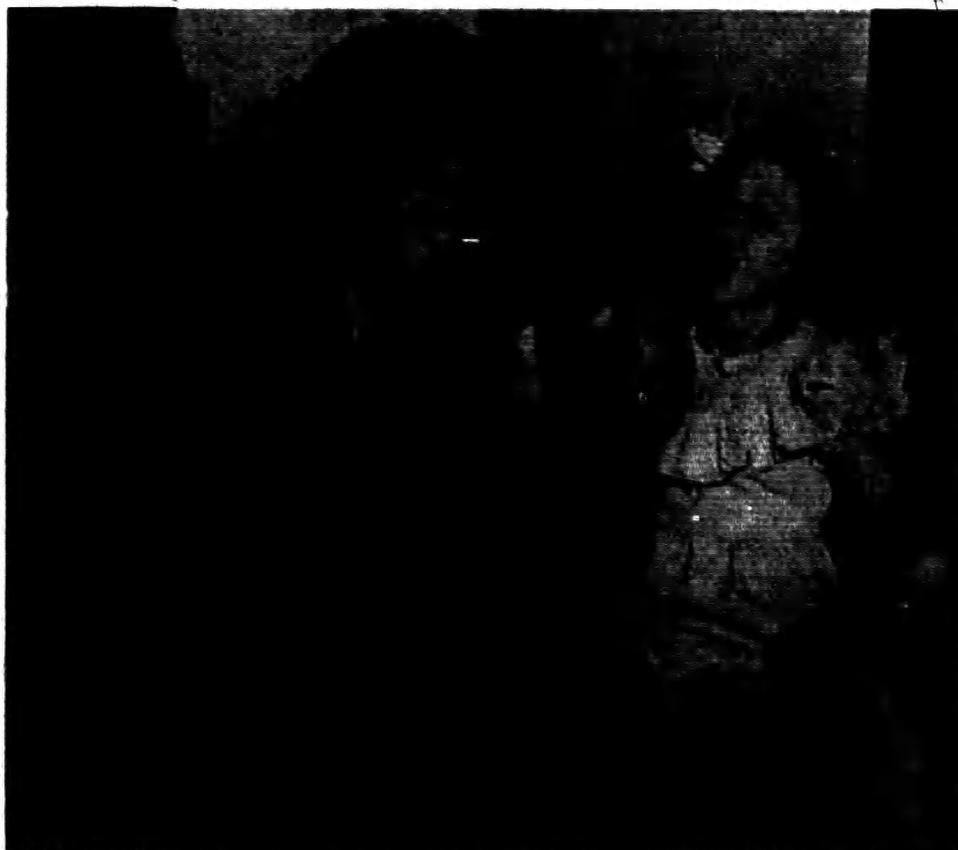
Motivation and Establishment of Rapport With the Child

The fact that speech correction is not narrowly concerned with speech deviations, as such, but rather with the children who have these deviations is indicated by the relatively great importance accorded the ability to develop a teaching atmosphere free from pressure and conducive to good mental health [2] and to inspire pupils to self-education for overcoming their speech difficulties [7].

Since children enrolled in speech programs must leave their regular classes for special work, speech correctionists must have the ability to improvise and to be resourceful in the selection of materials and activities of interest to children [17]. The ability to utilize the activities of the regular school program for speech correction purposes [33] was rated by speech correction teachers as "important." The teachers of speech correction also felt that they should have the ability to counsel pupils with speech deviations regarding their social and emotional problems [35] but they did not rate as highly the ability to counsel pupils regarding their educational and vocational problems [61].

The relatively low rating of importance given the ability to help normal children accept pupils with speech difficulties [56] is by no means an indication that the speech correction teachers minimize the problems which may arise when speech handicapped children are rejected by their classmates. It is more probable that they assume this to be a function of the regular class teacher.

However, the work of the speech correctionist in the school is an ever-present example of adults ministering to children with special needs, and may have a beneficial effect on the attitudes of all of the children toward those with special problems.



Detroit Public Schools

Oral examination precedes planning of speech correction.

Use of Pertinent Test Findings, Records, and Case Histories

Moderately high ratings were given to most of the competencies involved in making use of pertinent test findings, records, and case history reports [11, 18, 31, 34, 46, 50]. However, the lower rating given the ability to review and write reports and case histories of children with speech handicaps [57] is provocative. This implies the advisability of reviewing this aspect of existing training programs. Moreover, due attention is to be given to the difference between this rating and the relatively higher rating given to the ability to interpret diagnostic speech and hearing tests and the findings of specialists to classroom teachers and parents [18].

Planning and Developing a Speech-Correction Program

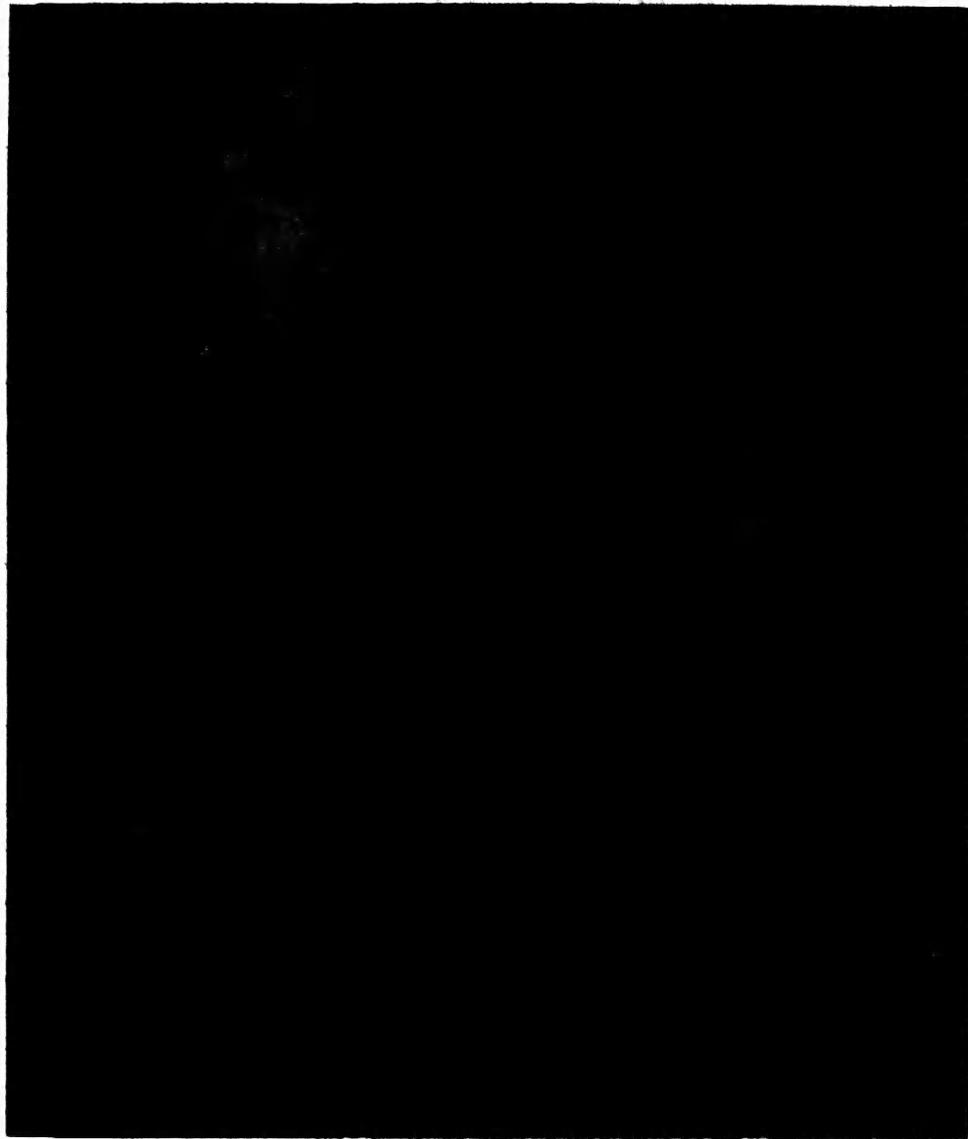
Speech correctionists work with children in small groups or individually as the nature and difficulty of the speech problems warrant. The ability to plan an effective speech correction schedule, involving several schools, which is acceptable to pupils, classroom teachers, and parents was considered "very important" [9]. This ability to plan an effective schedule is dependent upon a knowledge of survey and referral procedures which aid in finding pupils with impaired speech [20] and the ability to survey a school system [22].

The speech correction teachers attached a high degree of importance to the ability to cooperate in developing for each pupil a total and continuous educational program involving parents and regular school personnel [23]. The remedial speech teacher must be aware of the relationship of the speech correction program to the total program of the school [16] and be able to make it a smoothly running part of the total educational scheme. These teachers also need the ability to contribute to community leadership in establishing, developing, and interpreting the speech correction program to the general public [30]. In view of the importance attached by the speech correction teachers to competencies mentioned above, the much lower rating [72] given to a knowledge of the organization and operation of public school systems is significant.

The ratings made of those competencies involved in planning and developing a school program in speech correction reflects an emphasis on remedial speech work at the elementary [4] as compared with the secondary level [52]. Ranked slightly higher was the ability to carry on a speech correction program at *both* the elementary and secondary levels [48]. The speech correctionists gave a higher average rating to a knowledge or understanding of classroom teaching methods at the elementary level [37] than to a knowledge of these methods at the secondary level [73] or at the nursery and kindergarten level [68]. These differences should be considered in light of the fact that 95 percent of the speech correction teachers had some elementary children in their case loads while only a little over half had responsibility for any secondary pupils. (See Appendix B, page 58.)

Cooperation with Others Concerned with the Welfare and Education of the Child

High to moderate ratings were made of those types of knowledge and skill essential to the achievement of cooperative working relationships with others also concerned with the welfare and education of the child. Speech correctionists attached more value to such items when they pertained to local [27, 29, 32] as compared with national agencies and organizations [45].



Detroit Public Schools

Prosthetic appliances are often helpful to children with cleft palates.

The speech correctionists ranked high the ability to work as a member of a team [12], to recognize the need for referral to other specialists [13], and to obtain intelligent cooperation of school administrators in such matters as securing adequate facilities [24]. Their ratings point up the increasing importance of the team approach, also emphasized by workers in other special fields.

Skill in human relations was further emphasized in the importance attached by the speech correctionists to obtaining assistance from parents and classroom teachers in helping the child cope with his speech problem [3 and 6].

Knowledge of Basic Sciences, Professional Literature, and Research

Special note is to be taken of the varied rankings assigned to some competencies which have generally been considered "musts" in the professional preparation of teachers in this field. These competencies, given the rank-order ratings of 28, 40, 51, 77, and 79, respectively, have to do with knowledge of anatomy and physiology of the speech mechanism, of the phonetic structure of the English language, of the anatomy and physiology of the hearing mechanism, the ability to use the International system of phonetic notation, and knowledge of the physics of sound, including fundamental concepts of acoustics.

These represent some of the basic knowledges covered in courses having such titles as "voice and phonetics," "experimental phonetics," "acoustics," "anatomy of the ear and vocal organs," and "voice science." The generally low ratings of importance given most of these items by the speech correctionists may reflect in varying degrees one or more of the following factors: (a) inadequate training in the aspects of the field represented by these items; (b) habits of applying remedial procedures without intensive and discriminating use of diagnostic methods based upon available knowledge of the anatomy and physiology of speech sound production and reception; and (c) possible ambiguity of some of the items as worded, such as the ability "to use" the International phonetic system. For example, the respondents may have interpreted this phrasing as referring to the use of phonetic symbols in the commonly employed tests of speech sound articulation. Inadequate training is hardly to be dismissed as a possible factor without adequate investigation, since in all but a few of the larger universities courses in anatomy, physiology, and acoustics for speech correctionists, are not taught by anatomists, physiologists, or acoustic physicists or engineers but by instructors not specialized in these fields.

Meanwhile, the professional leaders who were members of the Competency Committee² agreed that all speech correction teachers should possess a knowledge of "the sciences basic to speech correction, such as anatomy, physiology, neurology, phonetics, semantics, and psychoacoustics."

Doubtless a certain amount of chin stroking will be indulged in by those responsible for the training of speech correction teachers when they note also the moderate to low ratings given to knowledge or understanding of the professional literature [43], research findings [49], and present-day controversial issues [63] in the field of speech correction.

²The text of the committee report appears on pages 20 to 27.

COMPETENCIES IDENTIFIED AND DESCRIBED BY A COMMITTEE

The Competency Committee defined as specifically as possible the specialized competencies which they thought teachers in the field of speech correction should have. It was the task of the committee to consider whether there are distinctive qualifications required of teachers in this area of specialization over and above those required for regular classroom teaching, and, if so, to identify the specific kinds of knowledge and skill, or ability, needed by speech correctionists.

Of the 10 members of the committee, 3 were supervisors or consultants of speech correction in State departments of education; 3 were supervisors of speech correction in large city school systems; 2 were affiliated with speech clinics and professional training programs in colleges and universities; 1 was on the staff of a hospital speech clinic, and 1 was working as a speech correctionist in a privately supported rehabilitation center. All of these individuals have had experience as members of university faculties and all have had supervisory experience.

Hildred A. Gross (*Chairman*)³

Geraldine Garrison

A. Bruce Graham

Wendell Johnson

Mamie Jo Jones

Elizabeth C. MacLearie

Darrel J. Mase

Margaret Hall Powers

Letitia Raubicheck

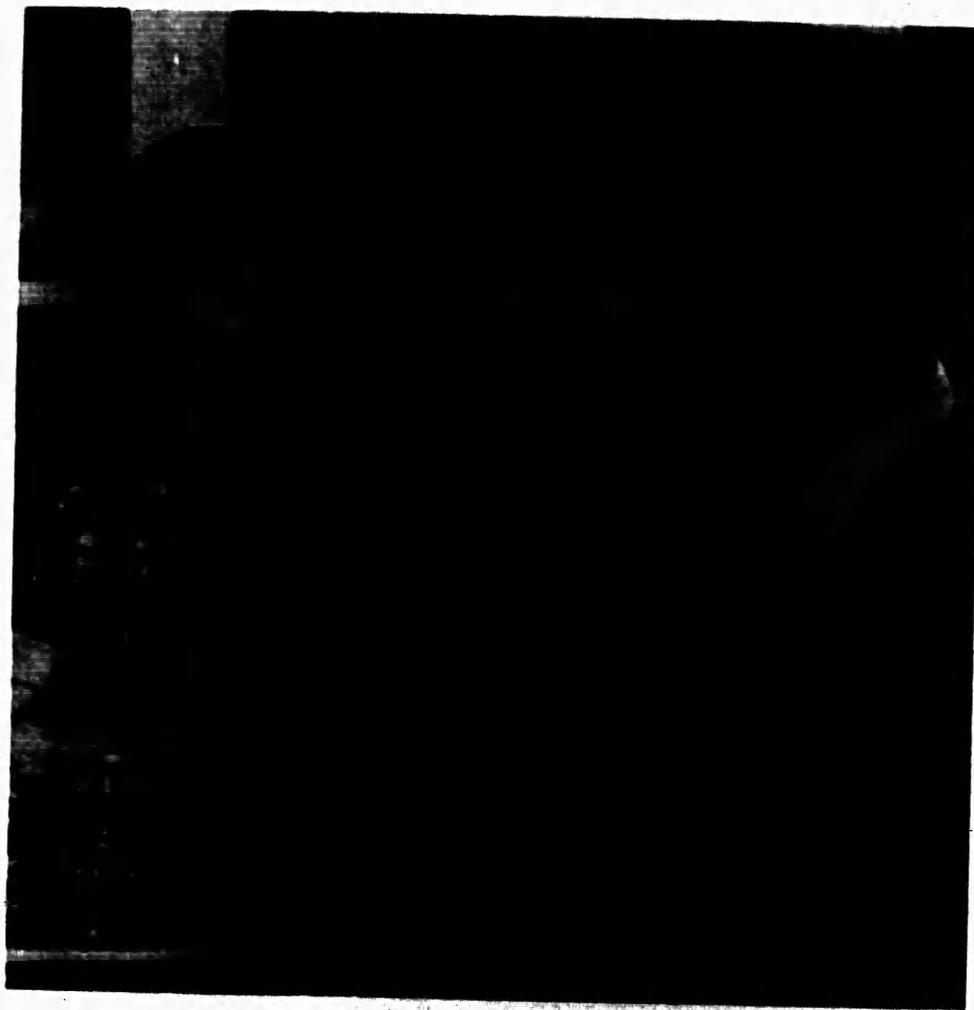
Bernice R. Rutherford

The Committee Report

What are the particular kinds of competence needed by speech-correction teachers in our Nation's schools? In attempting to answer this question, the committee members pooled their knowledge and the varied fruits of their training and experience. While much of the work of the committee was necessarily carried on by correspondence, it did have opportunity to meet on three occasions.

The committee was keenly aware of the responsibilities which it assumed in attempting to prepare a statement likely to affect the profession as a whole. Moreover, it recognized the restricted base of specific data and general knowledge from which to work. In presenting an answer to the very important question asked of it, the modest purpose of the committee is that this statement

³Titles of the committee members are shown on page IV.



University of Iowa

Children evaluate their own speech gains from tape recordings.

should serve as a general guide to those who are concerned with the planning and future development of professional training, research, and service programs, particularly school programs, in speech correction.

In formulating this report, the committee members have taken for granted that speech correctionists should possess the personal and social qualifications generally required of members of the teaching profession. They should have a substantial appreciation of the principles of personality development and they should demonstrate considerable self-understanding. They should be able to communicate orally and in writing with enough clarity and logic to be effective as teachers and as representatives of good speech. Speech correctionists should be well prepared and competent in their own field of professional specialization and they should have a deep and objective interest in children with speech problems.

Speech correction teachers usually find it necessary to work with children of different age and grade levels, and not only with those in regular classes, but also those in special classes and schools and those who are in, or transferred from, hospital schools and medical clinics. Though they cannot be expected to be specialists in all relevant areas, speech correctionists should have the knowledges and skills essential to a generally adequate understanding of children at various grade, age, and maturity levels, and of children with various types of speech impairments. They should be able to adapt to individual needs the techniques for individual and group instruction and should be familiar with the organizational and instructional programs under which services for the speech handicapped are provided, most particularly in schools, hospitals, and private and public speech clinics.

Competencies Related to General Education.—In substantial measure the competencies of the speech correction teacher are dependent upon his personal qualities, his general educational background, and his basic knowledge of children and the conditions by which they are affected. It is necessary for the public school speech correctionist to have a knowledge of the basic philosophies underlying present-day educational theory and practice in elementary and secondary schools. Any philosophy governing the teaching in one division or department of knowledge or training must necessarily be related to the current



Detroit Public Schools

Toy telephones make speaking and listening fun.



New York Public Schools

Children like to help one another on the road to better speech.

principles and practices of education as a whole. The speech correction teacher, therefore, needs a knowledge of the organization and operation of educational programs from nursery school through high school and at the adult level.

The speech correctionist must have a sound and comprehensive acquaintance with the facts and theories pertaining to the physical, emotional, social, and intellectual development of children. Since impaired speech is found among children of varied types and ages, and in association with various other handicapping conditions, the speech correctionist must be skilled in adjusting procedures for various types of exceptional children, including the gifted, blind, and partially sighted, deaf and hard of hearing, orthopedically limited, socially and emotionally maladjusted, mentally retarded, and those with special health problems. He needs to know, therefore, how expected growth and development, including speech development, have been modified in specific cases by injury, accident, diseases, malnutrition, or other relevant factors. He has need also for a trained appreciation of the functional interrelationship between impaired speech, on the one hand, and the processes of learning and personal adjustment, on the other.

The speech correction teacher must be able to gain the respect and understanding of his educational co-workers so that he may work effectively as a

member of the team responsible for the child's total welfare. This team includes the school administrator, classroom teacher, school nurse, parents, physician, and all others who contribute to the learning, mental and physical health, and recreation of the child. The speech correctionist must be able to marshal and coordinate all available resources in the school and community which can contribute to improvement in the child's speech and to his constructive adjustment to such limitations as may remain after maximal remedial attempts have been made.

The speech correctionist must be able to recognize growth patterns for different ages and grades in order to provide or develop methods and materials commensurate with the social, mental, and emotional maturity of any given child. If the speech correction program is to function at its highest level of effectiveness, the speech correctionist must be able to integrate its objectives and procedures with the total school program and to interpret the philosophy of the general educational program to parents and community leaders—in such a way as to make clear the needs and the possibilities for adapting this program to the problems of children with speech handicaps.

Competencies Related to the Organization of a Speech Correction Program.—

It goes without saying that an indispensable competency of the speech correction teacher is an ability to conduct an effective speech correction program. He must have an adequate store of up-to-date and dependable specialized knowledge about speech and its disorders, and he must be prepared by professional training to employ and to supervise the use of the diagnostic and remedial procedures essential in ministering to the needs of individuals who have speech disorders. The speech correctionist needs, therefore:

Knowledge

1. Of the various types of organizations having speech correction programs, such as schools, hospitals, and clinics.
2. Of teaching accommodations adequate and desirable for an effective speech correction program.
3. Of survey and referral systems which aid in locating pupils with impaired speech.

Skill

1. In planning an effective schedule for a program in one or more schools, hospitals, clinics, or a combination of these; in introducing and conducting the speech correction program so that children, parents, teachers, members of other professions, and the community at large will accept and support it.
2. In gaining the cooperation of administrators in providing satisfactory teaching accommodations; in consulting with those responsible for planning school facilities.
3. In locating these pupils through a plan acceptable in the particular situation; in arranging efficient schedules for effective remedial instruction acceptable to pupils, parent, and school or hospital personnel.

Knowledge

4. Of the total program of the school, hospital, or clinic.
5. Of the facilities for obtaining, directly or indirectly, information and evaluations concerning the child's physical, social, emotional, and intellectual status.
6. Of curricula at various grade levels.
7. Of needed and available supplies and equipment in relation to the total school budget.
8. Of the public-relations program of the school.

Skill

4. In selecting activities in the regular school or hospital program which can be utilized for remedial and speech purposes; in adapting these activities to group and individual methods of instruction.
5. In recommending referral to these facilities through the proper authorities; in interpreting the information obtained from these facilities in such a way as to further the speech-correction program.
6. In encouraging the child with the speech handicap to participate in curricular and social activities in full accordance with his abilities; in correlating the speech correction program with the total curriculum.
7. In selecting and utilizing the supplies and equipment available to all personnel as well as the special supplies and equipment for speech correction; in using supplies and equipment intelligently and keeping them in repair, up to date, and attractive.
8. In speaking, writing, or using other means of presenting the speech correction program; in participating effectively in public-relations programs.

Competencies Related to Remedial Activities.—From the point of view of the child who has a speech impairment, and from the point of view of his parents and teachers, undoubtedly the most important aspect of the competence of the speech-correction teacher lies in his specialized understanding of speech handicaps and the children who are affected by them and his ability to make personal application of specific diagnostic and remedial procedures in effective cooperation with other professional workers in the best interests of individual children.

It is important that major emphasis be placed upon the child who is to be helped rather than upon the physical setting or the particular professional arrangements within which the help is to be given. The place where speech correction is offered should not determine the specialized professional qualifications to be required of the speech correctionist who is to render the service. While this report is primarily concerned with speech-correction teachers in elementary and secondary schools, it is very important to stress the fact that such speech-correction its need the same basic training and qualifications as

do speech correctionists who work in other types of settings. All speech correctionists, therefore, should possess the following kinds of knowledge and related skills:

Knowledge

1. Of the different types, causes, and accepted remedial procedures for the correction or maximal alleviation of speech handicaps, such as functional articulatory disorders, stuttering, voice problems, delayed speech, and speech disorders associated with organic impairments, such as cleft palate and cerebral palsy, and with impaired hearing.
2. Of the sciences basic to speech correction, such as anatomy, physiology, neurology, phonetics, semantics, psychoacoustics, cultural anthropology, and psychology; of related areas, such as human growth and development, practical audiology, and educational and clinical counseling; and of speech recording and amplification equipment.
3. Of community resources such as (a) medical and non-medical personnel; family physicians, pediatricians, endocrinologists, neurologists, otologists, otolaryngologists, psychiatrists, oral surgeons, neurosurgeons, orthodontists, prosthodontists, occupational therapists, psychologists, social workers, and educational, vocational, and religious counselors; (b) hospitals, hospital schools, and medical clinics; (c) residential schools for the blind, deaf, and orthopedically handicapped; (d) agencies concerned with social work, rehabilitation, health, and recreation, and (e) institutions for the mentally retarded and socially and emotionally maladjusted.

Skill

1. In giving and evaluating individual diagnostic speech and hearing tests; in appraising the need for referral to medical, educational, recreational, and other specialists; in adapting speech reading, auditory training, and speech correction methods to the needs of individual children; and in interpreting the diagnostic speech and hearing evaluations to parents and teachers in order to bring about appropriate activities in the home and the classroom and the necessary follow-up and referrals.
2. In adapting the knowledge and methods of these basic sciences and related areas, and in adapting recording and amplifying equipment to the specific needs and problems arising in job situations and in work done with specific cases; in exercising sound judgment and operational effectiveness in keeping adequately informed in these basic and related fields, and in making indicated improvements in theoretical and practical approaches to the problems of speech correction.
3. In gaining the cooperation of professional workers or agencies in order to insure appropriate referral of speech handicapped children to speech correction teachers for needed training; in helping children and parents accept the special services they require; in reviewing and writing reports and case histories; in coordinating programs of activity and utilizing specialized information; in interpreting the findings of specialists to parents and to school administrators and teachers; in helping parents and school personnel understand the problem whenever progress is slow; and in assisting parents in taking a realistic attitude toward the program recommended whenever prognosis is poor.

Knowledge

4. Of educational, vocational, and personal adjustment problems related to speech impairments.
5. Of current acceptable methods and practices for the correction or maximal alleviation of speech handicaps.
6. Of research issues and experimental procedures and of on-going research in speech pathology.

Skill

4. In discriminating between his own responsibility and the responsibilities of cooperating specialists and co-workers; in coordinating the indicated services on behalf of the child.
5. In recognizing individual needs and the various stages of improvement so that children may be enabled to move from one remedial center or teacher to another with continuity of program; in developing and adapting a variety of techniques to facilitate improvement in children with varying needs.
6. In evaluating the various possible remedial techniques and selecting those particularly effective for each individual; in maintaining a constantly flexible, objective, and evaluative attitude toward the effects of remedial procedures in individual cases.

Concluding Remarks.—The members of the committee on competencies needed by speech correction teachers are encouraged by the attention now being directed toward improved educational standards. They are aware of the present wide variation in conditions at both the State and local levels, which may result in corresponding variation in local programs. The committee members recognize that efforts made to provide competent teachers at all levels and in all departments of education will bring increased recognition and greater understanding of the qualifications and preparation needed by speech correctionists.

Persons who have provided leadership in general education, special education, and in the specific area of speech correction are to be commended for the interest and support which they have stimulated and directed toward these programs. Recognition should also be given to the organizations working in support of adequate educational programs in all our schools for all our children.

Continued interest in education and increased financial support for it, locally and nationally, should make possible a greater number of qualified professional workers; more adequate teaching accommodations, supplies, and equipment; and increased research in those areas related to the study of speech handicaps and their prevention and correction. It is the hope of the committee that this report will contribute to increased recognition and greater understanding of problems related to speech and to the development of corrective speech services for all persons who need them.

(End of Committee Report)

DO SCHOOL SPEECH CORRECTIONISTS AND PROFESSIONAL LEADERS AGREE?

In general, there was considerable agreement between the speech correctionists and the committee of experts. The competencies evaluated by the speech correction teachers as "very important" or "important" overlapped considerably those recommended by the committee. The agreement was particularly marked in the importance attached to knowledge of the various types of speech problems and of relevant remedial methods, as well as the importance attached to the corresponding abilities to work remedially with children who have these speech problems. In other words, at the heart of the matter—speech disorders and speech correction per se—there was a clear meeting of minds.

There was some divergence of opinion between the two groups as to the relative importance of the kinds of knowledge and ability that may be regarded as either "basic" or "related" to speech correction in its more restricted sense. Differences were most apparent at points where the speech correctionist's job situation (the context in which evaluations of importance were made) would have influenced his opinion.

In comparing the opinions of the speech correction teachers with those of the committee of experts, it is necessary to keep in mind that the committee identified and described needed competencies but made no judgments as to their relative importance while the teachers rated for relative importance *in their present positions* a list of competencies to which they had no opportunity to add their own ideas. Clearly, then, it is not possible to make a rigorous point-by-point comparison of these two sets of data, although an essential comparison of them can be made.

The general concept of speech correction represented by the committee's report was somewhat more broad and comprehensive than that implied by the competency ratings of the speech correctionists. It may reasonably be assumed that this difference reflects, in its various manifestations, the relatively wider experience and professional maturity of the committee members.

Both the committee and the speech correctionists held that the speech correction teacher should have competence in (1) speech disorders and remedial techniques; (2) classroom teaching methods and child development; (3) motivating and establishing rapport with the child; (4) using pertinent test findings, records, and case histories; (5) planning and developing a speech-correction program; (6) cooperating with others concerned with the welfare of children with speech problems; (7) sciences basic to speech correction; and (8) professional literature and research.

The relatively low ratings of importance given by the speech-correction teachers to those knowledges and abilities needed to work with children with



University of Iowa

Specific sounds are practiced by naming pictures.

impaired hearing are noteworthy in comparison to the unequivocal manner in which the committee refers to the relationship between speech and hearing, and the inclusion in its report of clearly recommended competencies in audiology, amplification techniques, auditory training, and speech reading methods. The committee report may reflect the current trend towards a combined program of speech and hearing, while the speech correction teachers may have been influenced in their judgments by the low percentage of hard of hearing children in their case loads. This is a group of competencies which needs much more study in relation to the refinement of standards of professional preparation.

The relatively low ratings made by the speech correction teachers of the ability to serve as a regular classroom teacher and the ability to teach general

speech are to be noted in relation to the fact that the committee report makes no mention of these particular abilities. On the other hand, a knowledge of classroom or group teaching methods was considered by both to be important to the speech correction teacher.

The committee attached somewhat more importance to knowledge about relevant agencies and professional organizations, especially at the national level, than did the speech correction teachers.

The committee placed more importance than did the speech correction teachers on knowledge of research and familiarity with professional literature. In general, the committee stressed the importance of basic scientific knowledge essential to the understanding of speech handicapped children and the conditions that affect them. Both groups valued highly a knowledge and understanding of the school as an institution and of the philosophy and methods of education. The committee, perhaps to a somewhat greater degree than the speech correction teachers, also stressed the importance of a knowledge of the other settings in which speech correction is carried on and of other types of medical and nonmedical services needed in some instances by speech handicapped children.

The committee did not describe the personal characteristics important to a speech correction teacher. However, the members did say that they had "taken for granted" that the speech correctionist should possess the personal qualifications generally required of members of the teaching profession and that in substantial measure the competencies are dependent upon the personal qualities of the speech correction teacher. When the speech correction teachers themselves were asked whether they needed personal characteristics "different in degree or kind" from those needed by the teacher of so-called normal children, 69 percent responded in the affirmative. Among those personal qualities most frequently mentioned were: patience, understanding, adaptability and flexibility, sense of humor, and a warm and friendly nature.

Both the committee and the speech correction teachers expressed unmistakably the belief that, in order to be effective, a speech correctionist must have a combination of appropriate personal qualities, adequate general education, and specialized knowledges and skills.

Evaluations of Certain Proficiencies of Speech Correction Teachers

HOW COMPETENT are speech correction teachers? To what degree do they possess the kinds of knowledge and ability represented in Table 1? While recognizing the practical impossibility of obtaining exact or exhaustive answers to these questions, the investigators were nevertheless conscious of the keen interest on the part of all concerned in such approximate answers as could be secured. The attempt was made, therefore, to obtain certain relevant self-evaluations from the 120 speech correctionists who participated in the study, and to collect from State and local directors of speech correction programs their judgments as to selected aspects of the competence of recently trained speech correction teachers working under their supervision.

SPEECH CORRECTIONISTS' RATINGS OF THEIR OWN PROFICIENCY

The 120 speech correctionists who were asked to rate the relative importance of each of the 86 competencies included in Table 1 were also asked to evaluate their proficiency in each of these competencies. In making these evaluations, they used a 3-point scale, indicating degree of competence in each case as "good," "fair," or "not prepared." The rank order of each item, as determined by the mean self-evaluation of proficiency made by the 120 speech correctionists, is shown in Table 1.

The speech correctionists rated themselves as most competent in those knowledges and abilities directly applicable in dealing with the more common

speech problems in a school setting, as indicated by the 10 items for which they gave themselves the highest-mean ratings:

*Rank order
of proficiency*

Competency

- [1] Ability to hear normal speech clearly.
- [2] Ability to administer individual diagnostic speech tests.
- [3] Ability to recognize need for referral of a pupil with a speech disorder to medical, educational, recreational, and other specialists in the school system.
- [4] Ability to develop a teaching atmosphere free from pressure and conducive to good mental health.
- [5] Ability to enunciate clearly and pronounce words correctly.
- [6] Ability to serve as consultant on speech correction to regular classroom teachers.
- [7] Knowledge or understanding of survey and referral procedures which aid in finding pupils with speech impairments.
- [8] Knowledge or understanding of different types of speech handicaps.
- [9] Knowledge or understanding of the terminology related to speech correction.
- [10] Knowledge or understanding of the relationship of a speech correction program to the total program of the school.

It is illuminating to compare these competencies which the speech correction teachers felt they possessed in relatively high degree with the types of knowledge and ability in which they evaluated themselves as being least adequate. The latter fell for the most part in the general areas of knowledge about hearing and hearing impairment [55, 69, 79],¹ testing of hearing [53, 56], and remedial instruction for the hard of hearing [74, 76]; the ability to counsel speech handicapped pupils concerning their emotional and social adjustment problems [44] and their educational programs and their vocational planning [54]; their knowledge of clinical psychology and psychotherapy, particularly as these disciplines may contribute to speech correction for stutterers [73, 78, 81]; the needs, characteristics, and general plan of education for various types of exceptional children, such as the mentally retarded and crippled [66]; classroom teaching methods, at the secondary level [70] and at the kindergarten and nursery school levels [72]; knowledge of the diagnosis and general plan of medical treatment for those whose speech disorders have physical bases [71] and of services rendered by medical and dental specialists [58]; knowledge of rele-

¹In each case, the number in brackets refers to the rank order of proficiency (see table 1).

vant research findings [65] and, to a moderate degree, of reference materials and professional literature on the education and general care of the speech handicapped [35]; and, worthy of special note perhaps, knowledge or understanding of present-day controversial issues in speech correction [62].

Relationship Between Ratings of Importance of Competencies and Self-Ratings of Proficiency

Comparison of the ratings of importance of competencies with self-ratings of proficiency (see Table 1, page 6), serves to raise a number of questions. One of these is especially important, and the attempt was made in this study to obtain an answer to it. It is concerned with the degree to which the speech correctionists' ratings of their own proficiency in the 86 competencies were related to their ratings of the relative importance of these same competencies. There seem to be two major possibilities in this connection: (a) a tendency on the part of speech correctionists to rate as more important those types of knowledge and ability with respect to which they felt themselves to be the more competent, or (b) a tendency on the part of the speech correctionists to value competencies in proportion to their sense of shortcoming with respect to them. In order to check these possibilities, a random sample of 10 items was taken from the total list of 86, and for each of these 10 a contingency coefficient² was computed as a measure of the correlation between the raters' self-evaluations of proficiency in regard to the specific competency and their evaluations of its importance to them "in their present positions" as speech correctionists.³ The results indicate that there was, generally speaking, only a moderate positive correlation of statistical significance between the degrees of importance attributed to the 86 competencies and the degrees of proficiency which the raters claimed for themselves with respect to them. In other words, the speech correctionists seemed not to be extremely influenced by their sense of the relative importance of a given type of competency in estimating their own degree of proficiency with respect to it, and vice versa.

Statistical evaluations were made of differences on the individual items between the mean ratings of importance and the mean self-ratings of proficiency.⁴ Thirty-one of these differences were found to be statistically significant. The items concerned are shown in Tables 2 and 3.

²See Appendix C, page 61, for discussion of statistical procedures employed.

³The 10 coefficients ranged from 0.23 to 0.47, with a median of 0.31; the maximal values of the coefficients for the distributions involved ranged from 0.45 to 0.79, with a median of 0.63. The differences between the obtained and maximal coefficients ranged from 0.15 to 0.43, with a median of 0.32. Eight of the 10 coefficients had a chance probability of occurrence of .01 or less.

⁴See Appendix C, page 62.

Table 2.—Competencies for Which the Speech Correctionists' Ratings of Importance Exceeded Their Self-Ratings of Proficiency

Rank order of importance ¹	Competencies rated VERY IMPORTANT	Rank order of proficiency ¹
3	The ability to help parents understand their child's speech problems and personal attitudes.	15
5	A knowledge or understanding of how the child grows and develops physically, emotionally, socially, and intellectually.	26
7	The ability to inspire pupils with speech handicaps to self-education for overcoming their difficulties.	29
14	A knowledge or understanding of current information on causes (emotional and physical) of various types of speech handicaps.	24
23	The ability to cooperate in developing for each pupil with a speech or hearing problem an educational program which is a total continuous process involving the parents, regular school personnel, and the speech correctionists.	31
25	A knowledge or understanding of the dynamics of human adjustment.	48
29	A knowledge or understanding of services rendered by such medical specialists as physicians, pediatricians, endocrinologists, neurologists, otologists, otolaryngologists, psychiatrists, oral surgeons, orthodontists.	58
31	The ability to make interpretations from information supplied by otologists, otolaryngologists, oral surgeons, orthodontists, and other medical specialists.	47
Competencies rated IMPORTANT		
38	A knowledge or understanding of the diagnosis and general plan of medical treatment of those speech disorders having physical bases.	71
49	A knowledge or understanding of the findings of research studies which have bearing on the education, rehabilitation, psychology, and social status of the speech handicapped.	65

Table 2.—Competencies for Which the Speech Correctionists' Ratings of Importance Exceeded Their Self-Ratings of Proficiency—Continued

Rank order of importance ¹	Competencies rated IMPORTANT—Continued	Rank order of proficiency ¹
54	A knowledge or understanding of the needs, characteristics, and general plan of education for various types of exceptional children, such as the mentally retarded and crippled.	66
55	The ability to provide intensive psychotherapy when indicated, such as with the child who stutters.	78
59	A knowledge or understanding of terminology related to clinical psychology.	73
60	A knowledge or understanding of the psychotherapeutic techniques.	81
75	A knowledge or understanding of the diagnosis and general plan of medical treatment for different types of hearing impairment.	79
Competencies rated LESS IMPORTANT		
82	The ability to give first aid to hearing aids (day to day servicing).	86

¹The numbers represent the rank order of importance and proficiency as shown in Table 1, page 6. 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 statistically significant differences between rank orders of importance and proficiency. See Appendix C, page 62.

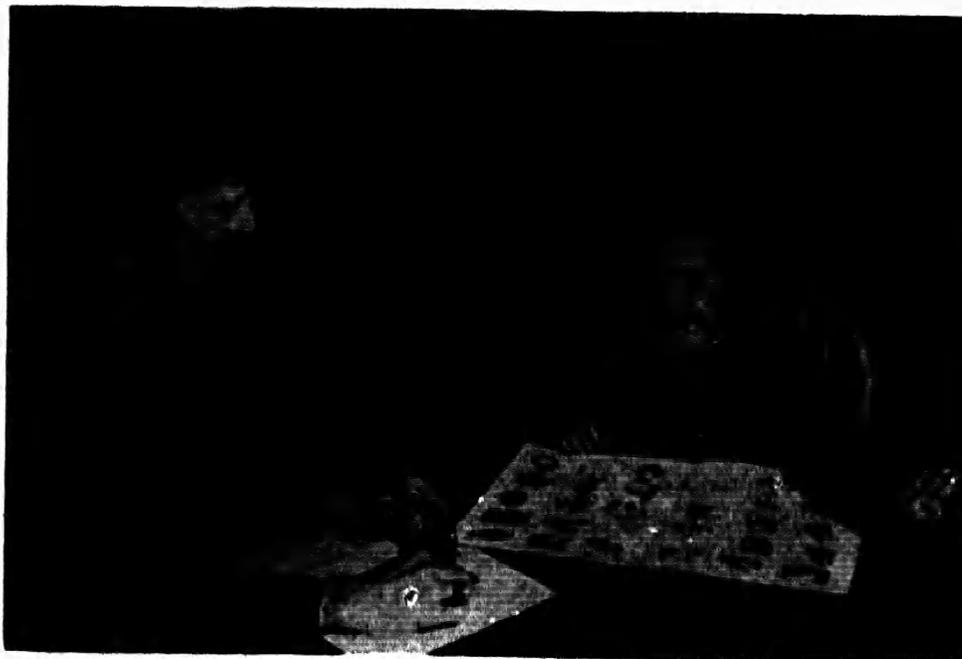
Table 3.—Competencies for Which the Speech Correctionists' Self-Ratings of Proficiency Exceeded Their Ratings of Importance

Rank order of importance ¹	Competencies rated IMPORTANT	Rank order of proficiency ¹
40	A knowledge or understanding of the phonetic structure of the English language.	22
41	The ability to operate tape and other types of voice recorders.	19
53	A knowledge or understanding of philosophical concepts underlying present-day education.	36
56	The ability to work with normal children in helping them accept pupils with speech problems.	37
57	The ability to review and write reports and case histories on children with speech handicaps.	27
70	A knowledge or understanding of the grammatical structure of the English language.	23
72	A knowledge or understanding of the organization and operation of public school systems.	50
77	The ability to use the International phonetic system.	41
Competencies rated LESS IMPORTANT		
78	The ability to teach pupils choral speaking, public speaking, puppetry, dramatics, and other aspects of a general speech program.	61
80	The ability to operate and use filmstrip and motion picture projectors and other visual aids.	77
81	The ability to read lips (teacher's own ability)	83
83	The ability to use diacritical marks.	67
84	The ability to serve as a regular classroom teacher.	63
85	The ability to direct a rhythm band.	85
86	The ability to play a piano.	84

¹See footnote at end of Table 2, page 35.

The following are the main conclusions which could be drawn from these data: Working speech correctionists, as represented by this sample, appear to feel a need for greater knowledge of personality adjustment and for more proficiency in dealing with the problems that center around it than they now have.⁵ They also seem to express some sense of insecurity regarding their knowledge of medical as well as educational and other services relevant to the needs of the speech handicapped, and they acknowledge less familiarity with relevant research literature than might be warranted by its indicated importance to them.

On the other hand, they appear to regard themselves as quite well equipped with certain kinds of knowledge and ability which they do not value very highly. Conspicuous among these competencies are the abilities to review and write reports and case histories on children with speech handicaps, to work with normal children in helping them accept pupils with speech problems, to operate tape and other types of voice recorders, and to use the International phonetic



Detroit Public Schools

Articulation tests aid in understanding speech problems.

⁵The data under discussion serve to recommend caution in interpreting the meaning of the speech correctionists' relatively high mean self-ratings of proficiency with respect "to the ability to develop a teaching atmosphere free from pressure and conducive to good mental health."

system, and a knowledge or understanding of the grammatical structure of the English language.

Of considerable interest is the inclusion in this group of the abilities required to teach general speech and to serve as regular classroom teachers. In this connection, it is to be appreciated that speech correctionists hardly ever spend any of their working time doing regular classroom teaching or giving general speech instruction to normally speaking pupils (see Appendix B, page 59).

Those responsible for the professional preparation of speech correctionists in the colleges and universities—and, most especially, students in training—will surely find much stimulus for earnest contemplation in these provocative data and their implications.

THE COMPETENCE OF WORKING SPEECH CORRECTIONISTS AS EVALUATED BY THEIR DIRECTORS AND SUPERVISORS

Evaluations of certain types of competence of recently trained speech correctionists working in their school programs were obtained from 155 special education directors and speech correction supervisors, 64 of whom were affiliated with State programs and 91 of whom were concerned with local programs of speech correction. The State directors evaluated speech correctionists who had completed their formal preparation within the last 5 years, and the local supervisors evaluated those who had completed their training within the past 7 years. The nature of the evaluations obtained is indicated in Graph 1, which shows the percent of supervisory personnel expressing dissatisfaction on each of 14 questions. (For the percent expressing dissatisfaction or indecision on these questions, and for opinions of State and local personnel presented separately, see Table 3, Appendix C, page 66).

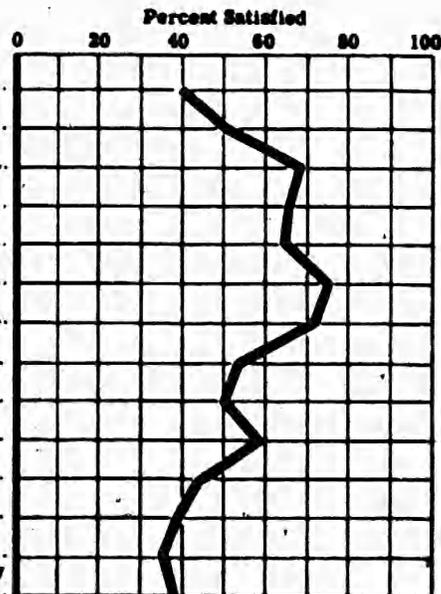
With respect to the items most directly concerned with speech correction as such, 3 through 7 in Graph 1, from 60 to 80 percent of the directors and supervisors reported the level of competence of the speech correctionists in their school systems to be satisfactory. Fewer than 60 percent, however, expressed satisfaction with the speech correctionists' ability to identify causes of social and emotional maladjustments, do psychological and achievement testing, and make use of educational records and psychological and medical reports, and their knowledge of agencies and clinics that provide medical and non-medical services needed by speech handicapped children. Most of the directors and supervisors were less than satisfied with the speech correctionists' basic orientation to the education of the various types of exceptional children and with their knowledge of the basic principles of child growth and development.

Percent of Supervisory Personnel Satisfied with the Preparation of Recently Graduated Speech Correctionists

QUESTIONS

Do these teachers have adequate preparation in and/or adequate understanding of:

1. Basic orientation to the education of various types of exceptional children?
2. Basic principles of child growth and development?
3. Planning a curriculum suited to the individual needs and group needs of the pupils?
4. Teaching at the appropriate developmental levels of their pupils?
5. Planning with groups of pupils so each child participates according to his ability?
6. Applying teaching methods used in their specialized area?
7. Applying teaching aids used in their specialized area?
8. Developing and interpreting educational records?
9. Interpreting educational and psychological reports and case histories?
10. Making use of medical reports?
11. Group intelligence and achievement testing?
12. Identifying causes of social and emotional maladjustment?
13. Agencies concerned with children who have speech handicaps and how to secure their services?
14. Services provided for speech handicapped children by speech, psychological, medical and other clinics?



In general, there was substantial agreement between the evaluations made by administrative and supervisory personnel on State and local levels, respectively.⁶ Moreover, the findings from this aspect of the study agree in substance with the speech correctionists' ratings of their own competence in that both sets of data indicate that the speech correctionists are most competent, comparatively, in applying the types of knowledge and ability that lie at the core of their field of specialization.

These findings strongly imply, as do the Competency Committee report and the evaluations made by the working speech correctionists of their own competencies, that there is a need to broaden and to strengthen the professional training programs designed to prepare speech correctionists for work in elementary and secondary schools.⁷

⁶There were no statistically significant differences between the "yes" replies of the State and local personnel on any of these questions. See Appendix C, page 65.

⁷Information concerning the status of the responding speech correctionists with respect to requirements for Basic and Advanced Certification by the American Speech and Hearing Association, or with respect to standards of professional training stated in equivalent terms, was not requested in systematic detail. The data summarized in footnote 2, page 44, however, indicate that possibly a quarter or more of the 120 respondents were not fully qualified for the Association's Basic Certification. Findings are to be interpreted with due consideration of this fact.

Evaluations of Practice Teaching, Clinical Practice, and Observation as Training Experiences

SCHOOL ADMINISTRATORS, college and university instructors who train speech correctionists, and speech correction teachers themselves are necessarily concerned with the problem of identifying and utilizing those experiences which contribute most effectively to professional preparation for work in this field. The speech correction teachers who answered the questions on the inquiry form furnished certain facts about their own specialized training and evaluated that training in three ways: (1) by indicating their ratings of the importance of various professional training experiences; (2) by answering questions regarding the quality of certain aspects of their preparation; and (3) by expressing their opinions regarding the amount of supervised practice in speech correction and amount of regular classroom teaching (if any) that should be included in their specialized preparation.

How important are practice teaching, clinical practice, and observation as professional training experiences? The 120 participating speech correction teachers were asked to rate the relative importance of each of 22 such activities in the specialized preparation of speech correctionists. The list was prepared by the Office of Education staff, and pre-tested by leaders in the fields of special education and speech correction. The average ratings made by the 120 speech correctionists appear in Table 4, and the items are ranked according to these average ratings. All 22 items were classified by the speech correctionists as either "very important" or "important"; no experience in the list received an average rating within the "less important" or "not important" range.

In general, the training experiences which the speech correctionists valued most (the first 8 in the list) involved practice teaching with speech handicapped pupils in school systems, supervised clinical practice, and experience in drawing interpretations from case reports. It is to be noted that although

Table 4.—Relative Importance which Speech Correctionists placed on Certain Practical Experiences in Specialized Preparation

Rank order of importance ¹	EXPERIENCES
Items rated VERY IMPORTANT ² (1 - 8)	
1	Student teaching in speech correction in a school system under the supervision of a qualified speech correction teacher.
2	Supervised clinical practice in individual diagnosis of speech disorders.
3	Supervised student teaching in speech correction in a school system with groups of speech handicapped pupils.
4	Supervised practice in speech correction at a speech clinic — with groups of speech handicapped children;
5	with individual cases.
6	Supervised student teaching in speech correction in a school system— at the elementary-school level;
7	with individual cases.
8	Experience in drawing interpretations from case records on speech handicapped pupils.
Items rated IMPORTANT (9 - 22)	
9	Experience in drawing interpretations from psychological reports.
10	Supervised clinical practice in individual testing of hearing with the pure-tone audiometer.
11	Supervised student teaching in speech correction in a school system at the secondary-school level.
12	Experiences in drawing interpretations from otological, orthodontal, and other medical reports.

¹ See footnotes at end of table.

SPEECH CORRECTIONISTS

Table 4.—Relative Importance which Speech Correctionists placed on Certain Practical Experiences in Specialized Preparation—Continued

Rank order of importance ¹	EXPERIENCES
Items rated IMPORTANT (9 - 22)—Continued	
13	Experiences in drawing interpretations from reports of social workers.
	Supervised student teaching with the hard of hearing —
14	in speech development;
15	in lipreading (speech reading);
16	in auditory training.
	Supervised practice in speech development —
17	with the cerebral palsied;
18	with the so-called aphasic child.
19	Supervised student teaching in speech correction in a school system at the nursery school or kindergarten level.
20	Visits to the homes of children with speech problems in the company of supervising teachers.
21	Supervised observation of regular classroom teaching of pupils at different grade levels.
22	Supervised student teaching in regular classrooms (not speech correction).
Items rated LESS IMPORTANT or NOT IMPORTANT — None	

¹The rank of each item was determined by the average ratings of importance it received by the participating speech correctionists. See Appendix C, page 63, for detailed information on statistical procedures and results.

²Items were classified into the 4 groups of importance according to their average ratings: "very important," "important," "less important," and "not important." See Appendix C, page 63.

supervised experience in speech correction, both with individuals and with groups, was rated high, nevertheless supervised clinical practice with the cerebral palsied [17]¹ and so-called aphasic children [18] were given comparatively lower ratings than were training experiences with the hard of hearing [14, 15, 16]. Student teaching experiences in speech correction at both the kindergarten [19] and secondary levels [11] were rated below those at the elementary level [6].

Supervised clinical practice in individual diagnosis was ranked second on the list. This is consistent with the importance placed on adequate evaluation of the needs of individual children by both the committee and the teachers.

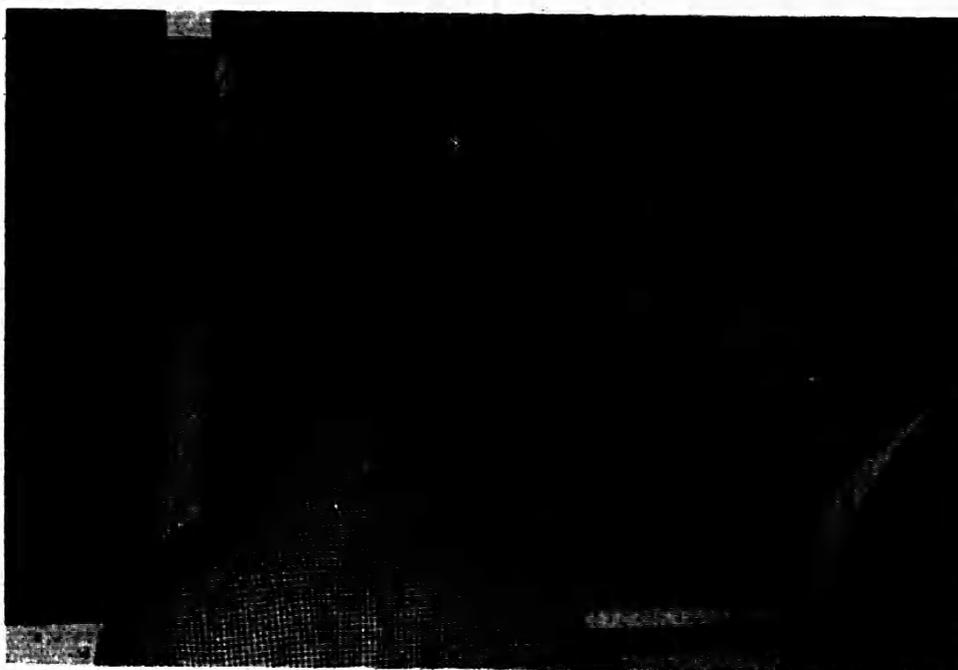
Observation of regular classroom teaching [21] and student teaching in the regular classroom, not involving speech correction [22], were given the lowest ratings, but even so, both of these received an average rating of "important."

The speech correction teachers were also asked certain questions about some of the college courses they had had. The following tabulation presents only the opinions of those who received their professional preparation after January 1, 1946:

Question	Percent indicating		
	Yes	No	Undecided
Was there undue repetition and overlap of content —			
in the general cultural courses?.....	8	85	7
in the general teacher-education courses?.....	55	41	4
in the specialized courses in speech correction?.	11	86	3
Do you believe that you received <i>too much</i> theory and <i>not enough</i> supervised practical experience in speech correction?	23	72	5
Do you believe that you received <i>too much</i> supervised practical experience and <i>not enough</i> theory in speech correction?	0	97	3
Did you receive <i>too much</i> of your supervised practice in speech correction in a clinic and <i>not enough</i> in a school system?	47	45	8
Did you receive <i>too much</i> of your supervised practice in speech correction in a school system and <i>not enough</i> in a clinic?	3	93	4

¹In each case the number in brackets refers to the rank order of importance (see table 4).

From these data it would appear that so far as dissatisfaction was expressed it concerned mainly undue repetition and overlapping of content in general teacher education courses. About 20 percent appeared to believe that a somewhat better balance between theory and practice might have been achieved in the speech correction courses they had taken, but a rather substantial majority seemed to feel that the emphasis on theory had not been excessive and nearly all agreed that there had not been too much supervised practical experience included in their formal preparation. Better balance could be achieved, according to nearly half of these same speech correction teachers, by increasing the relative amount of supervised speech correction in a school system as compared to a clinic.²



University of Iowa

A mirror can help the child see how to make sounds correctly.

²Only three speech correctionists reported that they had had no practice experience in a clinic; all of these had received their training after 1946. Moreover, 45 had experienced no student teaching in speech correction in public schools during their training; of these, two-thirds had received their preparation since 1946. It is of interest to note that about one-fourth of the teachers trained since 1946 had not had 200 clock-hours of supervised practice in speech correction, the amount required for Basic Certification in speech correction by the American Speech and Hearing Association.

SPEECH CORRECTIONISTS' RECOMMENDATIONS CONCERNING SUPERVISED PRACTICE IN SPEECH CORRECTION TRAINING PROGRAMS

The 120 working speech correctionists were asked to recommend minimal, desirable, and ideal number of clock-hours of supervised practice in speech correction in schools and in clinics which they would include in professional preparation. Their responses are summarized in Table 5. Many states as well as the American Speech and Hearing Association specify 200 clock-hours of supervised clinical practice for basic certification in speech. It is of interest

Table 5.—Amount of Supervised Practice in Speech Correction in Schools and in Clinics Needed in the Professional Preparation of Speech Correctionists

Clock-hours	Percent ¹ of Teachers Checking each Amount of Supervised Speech Correction —					
	In a school as —			In a clinic as —		
	Minimal	Desirable	Ideal	Minimal	Desirable	Ideal
1	2	3	4	5	6	7
None.....	3			6		
1-75.....	37	7	1	27	7	3
76-150.....	30	26	17	37	23	8
151-225.....	21	30	21	23	34	23
226-300.....	9	27	21	6	24	23
301-375.....		9	16		11	19
376-450.....		1	24		1	23
More than 450.....						1
Median.....	100	192	265	100	195	276
Number answering	92	93	90	84	91	89

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

to note that the median number of clock-hours recommended as "minimal" by the 120 speech correctionists was 209. The median numbers recommended as "desirable" and "ideal" were, respectively, 387 and 541. The speech correctionists favored an essentially equal distribution of the recommended hours of supervised practice as between schools and clinics.

EVALUATION OF CLASSROOM TEACHING EXPERIENCE WITH NORMAL CHILDREN IN THE TRAINING OF SPEECH CORRECTIONISTS

Should teaching experience with normal children be a prerequisite experience for one preparing to be a speech correctionist? If so, how much successful classroom teaching with so-called normal children should he have? The 120 speech correctionists were given opportunity to express their opinions about this. A total of 110 responded to a question which asked, "If you consider *regular* classroom teaching of some importance, indicate (1) the amount which you believe should be *minimal*, *desirable* and *ideal* prerequisites for a speech correctionist in a school system, and (2) the amount of classroom teaching which you have had."

The fact that most of the 120 speech correction teachers answered at least some part of this question indicates that in their judgment classroom teaching does have some value. The amount thought to be "minimal," "desirable," and "ideal," however, is a matter on which they did not fully agree. (See Table 6, page 47.) As a "minimal" requirement, nearly half indicated that one semester of half-time student teaching with normal children would be sufficient. Opinions were about equally divided between student teaching and 1 or 2 years of regular classroom teaching as a "desirable" amount. But in thinking about the "ideal" nearly all of the speech correction teachers chose regular classroom teaching—1, 2, or 3 years.

In view of the fact that this is a controversial issue among those responsible for the preparation of speech correctionists, due care should be used in drawing conclusions from these opinions. It is evident that this particular group of successful speech correctionists had found their own regular teaching experiences to be of sufficient value in their present work with children who have speech problems to recommend that such experience be a prerequisite to professional work in this field. There may be other more effective ways of acquiring the kinds of competencies in general education considered important by both the committee and the speech correctionists. A fruitful area for further study might be a detailed analysis of the factors in regular classroom teaching which are applicable to the work of the speech correctionist and some experimentation with other means of attaining the same goals.

Table 6.—Amount of Classroom Teaching Experience with Normal Children Said to be Needed by those Preparing to be Speech Correctionists, and amount of Regular Teaching Experience Reported by the Participating Speech Correctionists

Teaching Experience with Normal Children	Percent ¹ of Speech Correctionists			
	Checking each amount as —			Checking each amount as the amount they had
	Minimal	Desirable	Ideal	
1	2	3	4	5
None.....				5
One semester, half-time student teaching.	46	10	1	18
One semester, full-time student teaching.	25	37	11	8
One year of classroom teaching...	20	23	36	9
Two years of classroom teaching	8	25	22	8
Three years of classroom teaching	1	5	27	14
More than 3 years of classroom teaching.			3	39
Number answering ²	79	81	77	102

¹Percents are based on the number answering in each category. Because of rounding off, unit percents may not equal 100.

²A total of 110 of the 120 speech correctionists answered one or more of the questions represented in this table. The respondents were asked to answer these questions provided they "regarded classroom teaching experience with normal children to be important in the training of speech correctionists."

Summary

THE INFORMATION REPORTED in this publication was obtained through an exploratory, opinion-type study, directed toward the identification of some of the factors which make a speech correction teacher successful. Opinions were obtained from 120 speech correction teachers in elementary and secondary schools, 64 directors and specialists in State departments of education, 91 directors and supervisors of speech correction programs in local school systems, and a committee of 10 leaders in the field of speech correction. The validity of the findings rests mainly on the expertness of these participants who, because of their specialized experience and professional preparation, were recognized as qualified to express opinions based on sound judgment.

FINDINGS

Summarized below are some of the major results of this study. Through the cooperation of the participants, opinions were collected on: (a) competencies needed by elementary- and secondary-school speech correctionists; (b) the relative on-the-job importance of these competencies; (c) the proficiencies of speech correctionists; and (d) types of professional training experiences which develop the required competencies.

Competencies

◆ Both the group of 120 successful speech correctionists in elementary and secondary schools and the 10-member committee of experts asserted that the speech correction teacher needs a rather wide array of knowledge and skills if he is to be fully effective in helping children overcome their speech difficulties.

Above all, he must understand the various types and causes of speech defects and be able to apply specific diagnostic and remedial procedures to individual children. Included in his specialized competence are such skills as administering and interpreting diagnostic speech tests and utilizing special supplies and equipment.

◆ Both groups envisioned the speech correction teacher as one with a broad understanding of human development and specific knowledge of how speech disorders affect such development in children. Since the speech correction teacher may work with all types of children, he must not only understand the so-called normal child but also the needs and characteristics of children who have various types of physical, mental, or emotional handicaps or who are gifted.

◆ Both the committee and the speech correctionists placed high value on the ability to establish rapport with the child and to help him deal with social or emotional problems which he may have as a result of his speech condition or which may be slowing down the therapeutic process. Closely related to this is the high importance placed by the speech correction teachers on the ability to develop a teaching atmosphere free from pressure and conducive to good mental health. Also emphasized by the speech correctionists was the ability to inspire pupils to self-education for overcoming their difficulties.

◆ A speech correction teacher, according to evidence in this study, should have a thorough knowledge of general education—curriculum, individual and group teaching methods, philosophy and organization—and should be able to integrate and correlate the speech correction activities with the total program of the school. To the extent that speech correction teachers work with various age and grade levels and with children who have additional handicaps, this suggests the need for a rather broad background of knowledge and experience.

◆ Some administrative ability appears to be needed by the speech correctionist. According to both groups, he should know and be able to apply survey and referral systems used to locate pupils with impaired speech; be able to develop, plan, and coordinate an effective schedule for a speech correction program in several schools which is acceptable to pupils, classroom teachers, and parents; and be able to correlate this with the regular school program.

◆ Both groups stressed the need for skill in working as a team member with other professional workers. The committee pointed out that this calls for ability in initiating a two-way referral process so that the resources of the school and community may be coordinated to best serve the child with a speech problem. Closely related to this is the importance attached by both the speech correctionists and the committee to a knowledge of the community agencies which specialize in helping children with their social, medical, psychological, or other problems.

◆ The speech correctionists placed slightly more importance on the ability to interpret medical and psychological reports than on the ability to interpret audiograms or reports of social workers. Their own ability to review and write

reports and case histories was, in their judgment, less valuable in their present positions, although it did receive an average rating of "important." All of these competencies, although expressed somewhat differently, were included in the committee report. They indicated that the speech correctionist should have a knowledge of the "facilities for obtaining information and evaluations concerning the child's physical, social, emotional, and intellectual status," be able to interpret the information obtained "in such a way as to further the speech correction program," and have skill in "reviewing and writing reports and case histories."

◆ Underscored by the speech correctionists was the ability to help parents understand their child's speech problems and personal attitudes. In this regard



University of Iowa

Picture books make speech stimulation fun.

the committee indicated that the speech correction teacher should be able to assist the parents in taking a realistic attitude toward the recommended program in a case in which the prognosis is poor or whenever progress is slower than anticipated.

◆ Members of the committee emphasized more of the basic sciences related to speech problems than were in the list submitted to speech correction teachers. Those that were included in the teachers' list received a wide variety of evaluations of importance. The committee thought that the teacher should have a knowledge of such sciences as anatomy, physiology, neurology, phonetics, semantics, psycho-acoustics, and cultural anthropology. Of those in the teacher list, the only one to receive a "very important" rating was anatomy and physiology of the speech mechanism. In contrast, they rated a knowledge of the physics of sound and the fundamental concepts of acoustics as among the lowest in the list.

◆ A knowledge of professional literature and research studies, although rated as "important," was certainly not emphasized by the speech correction teachers. Rated even further down the list was a knowledge of present-day controversial issues in speech correction. On the other hand, they placed high value on having *current* information on the emotional and physical causes of the various types of speech handicaps. All of these were also included in the committee report as competencies needed by speech correction teachers.

◆ On only two competencies in the entire list was there a statistically significant difference of opinion between the speech correctionists prepared prior to January 1, 1946, and those prepared since that date.

◆ One of the most important results of the present study is the inventory of knowledges, understandings, abilities, and skills individually considered. No summary analysis will replace a careful reading of the items in the committee report and in Table 1, point by point.

Evaluations of Proficiency

◆ Speech correctionists judged themselves to be most proficient in those knowledges and skills directly applicable in dealing with speech problems in a school system. Some of these were: Knowledge of survey procedures for locating pupils with speech impairments, ability to administer individual diagnostic speech tests; knowledge of different types of speech handicaps; and ability to serve as a speech correction consultant to regular classroom teachers. In comparison, they rated themselves least proficient in such competencies as knowing the needs and characteristics of various types of exceptional children and the diagnosis and general plan of medical treatment of those whose speech disorders have physical bases.

◆ On 31 of the 86 competencies, statistically significant differences were found between the average ratings of proficiency and the average ratings of

importance. Relatively lower ratings of proficiency were made on such "very important" competencies as understanding how the child grows and develops, the ability to help parents understand their child's speech problems and personal attitudes, and the ability to inspire pupils to self-education for overcoming their difficulties.

◆ State and local directors and supervisors of special education who evaluated the preparation of the recently graduated speech correction teachers in their school systems were most satisfied with the speech correctionists' ability to use appropriate teaching methods, materials, and aids. They were somewhat less satisfied with their ability to use various records, reports, and tests and least satisfied with their knowledge of related community agencies and clinics.

Professional Preparation and Experiences

◆ The 120 speech correctionists believed there should be a variety of practical experiences including student teaching of speech correction in a school system and in a clinic, with groups and with individual cases; supervised clinical practice in diagnosis of individual speech disorders; and interpreting various kinds of records. Student teaching of speech correction at the elementary level was regarded as more important than at the kindergarten or secondary level.

◆ Rated as "important" but at the lower end of the list were such experiences as supervised practice in speech development with the cerebral palsied and the allegedly aphasic child, supervised observation of regular classroom teaching at different grade levels, and supervised student teaching in regular classrooms.

◆ Recently prepared speech correction teachers did not report any undue repetition and overlap in their liberal arts courses or in their specialized courses in speech correction, but half of them indicated there was repetition in their general teacher-education courses. Most of them thought the balance between theory and practice in their specialized preparation had been about right but that they did not have enough supervised student teaching in speech correction in a school system in comparison to the amount they had in a clinic.

◆ The speech correctionists favored an equal distribution of supervised practice between clinic and school. The median number of clock-hours which they regarded as "minimal" was 209; as "desirable," 387; and as "ideal," 541.

◆ Most of the speech correction teachers in this study thought that some classroom teaching experience with normal children is valuable for those preparing to be speech correctionists in a school system. As a "minimal" prerequisite, the majority indicated that student teaching would suffice; for a "desirable" amount they were about equally divided between student teaching and actual experience as a regular classroom teacher; but for the "ideal" by far the majority favored 1, 2, or even 3 years as a regular classroom teacher.

RECOMMENDED AGENDA FOR FURTHER STUDY

The information and opinions assembled in this study and presented in this report appear to have certain implications for instructors at the college and university level, for administrators responsible for professional training programs, and for administrators and supervisors in charge of State and local speech correction programs. These implications are presented, not as recommendations, but in the form of a suggested agenda made up of problems for further research, further thought and discussion, and possible stimulation of review and reconsideration of basic philosophies and operating policies in particular situations. The following problems appear to qualify for such an agenda:

1. The problem of developing the administrative policies and arrangements necessary in order to provide prospective and working speech correctionists with ample opportunities to relate to other areas of exceptionality in their training programs.
2. Ways and means of expanding and intensifying recruitment programs designed to attract high school graduates and college students into this professional field, in view of the serious shortage of speech correctionists in the United States.
3. The problem of stimulating students of speech correction to seek broad cultural and general education at the college level as essential preparation for subsequent cultivation of an inquiring, sympathetic, and evaluative interest in the local and comprehensive social contexts with which they are to carry on their work.
4. The problem of developing improved procedures for evaluating essential aptitudes of candidates for professional training in speech correction.
5. The problem, in connection with the selection, recruitment, and training of speech correctionists, of evaluating and, so far as possible, encouraging appropriate personality tendencies, effective speech behavior, and skill in developing and maintaining constructive relationships with other individuals and the general public.
6. The problem of motivating and training students to make effective use of research findings and disciplined investigative and scientific thinking, in order that they may continuously improve their policies and procedures in subsequent job situations in the best interests of the individual speech handicapped children for whom they assume professional responsibility.
7. The problem of motivating and training students to develop the attitudes and skills which they need in order to obtain and utilize adequate information for diagnostic purposes and to make objective evaluations of the results of their remedial methods in individual cases.
8. Possibilities of providing students with adequate supervised experience in communicating through oral and written reports addressed to other cooperating specialists, and in interpreting records and reports received from other workers in speech correction and in related areas of professional specialization.
9. Ways and means of providing students in training with appropriate kinds and amounts of supervised experience, covering the various types of cases and problems, in both school and clinical situations.

SPEECH CORRECTIONISTS

10. Possible ways of providing students with adequate instruction to prepare them to serve appropriately the auditorially handicapped pupils included in school speech correction programs.

11. The providing of the best possible instruction for prospective speech correctionists in the physical, mental, and emotional aspects of child growth and development.

12. The problem of working out arrangements—and encouraging students to take advantage of them—under which students may gain experience in working with groups of children in summer camps and playground programs, as well as the public schools, in order to acquire familiarity with problems of group management and with the range of children's interests, activities, and modes of interaction.

13. The problem of encouraging prospective and working speech correctionists to identify themselves actively with appropriate professional organizations on the national, as well as regional and local, levels.⁸

14. The problem of providing adequate physical facilities for speech correction in existing school buildings, and of designing new school buildings with a view to the specific needs of speech correction programs to be carried on within their walls.

15. Ways and means of improving State certification regulations, and of formulating and administering appropriate regulations in this professional area, with particular reference to the commonly recognized need of the public school speech correctionist to work at all levels from kindergarten through high school.

16. The exploration of bases for determining the most appropriate case loads for speech correctionists in various types of situations. (This item on the agenda is suggested by the average load of 176 cases reported by the 120 participating speech correctionists.)

17. Ways and means of providing for adequate evaluation of training programs through continuous followup studies of on-the-job experiences of graduates and through other means.

18. The ever-present problem of colleges and universities offering professional training programs in speech correction of giving systematic and comprehensive attention to the improvement of these programs, both qualitatively and in scope, with due evaluative attention to the professional standards of such organizations as the American Speech and Hearing Association and of the various State and local boards concerned with standards of teacher certification.

⁸Information concerning the programs and purposes of the following organizations may be obtained by sending inquiries to the indicated addresses: The American Speech and Hearing Association, 1001 Connecticut Ave., N.W., Washington 6, D. C.; The International Council for Exceptional Children, 1201 Sixteenth St., N.W., Washington 6, D.C.; The National Education Association, 1201 Sixteenth St., N.W., Washington 6, D. C.; The American Psychological Association, 1335 Sixteenth St., N.W., Washington 6, D. C.; The American Hearing Society, 817 Fourteenth St., N.W., Washington 5, D. C.

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 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 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 where 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 long-anticipated week's work conference was convened in Washington, when 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 120 Speech Correctionists who Supplied the Data for this Study

THE DESIGN of this study called for 100 speech correctionists to supply facts and opinions through an extensive inquiry form. An effort was made to secure a representative sampling of superior speech-correction 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 assistance of the Research and Statistical Services Branch, of the United States Office of Education. Among the factors considered in establishing the quota for each State were child population and number of pupils enrolled in special education facilities for the speech handicapped in the State. It was specified that the teachers selected for inclusion in the study must have had specialized professional training in speech correction, be currently employed as speech correctionists, and be rated as superior by their supervisors.

State departments of education submitted the names and addresses of 225 speech correctionists. Inquiry forms were sent to all of these; 164 forms were completed and returned. Forty-four respondents either did not meet the specified criteria or were not employed as itinerant speech correctionists in a school system. (Responding speech correctionists working in other situations did not constitute a large enough sample to be included.) Data obtained from the remaining 120 itinerant speech correctionists are reported in this bulletin.

Of the 120 speech correctionists, 40 had completed their specialized professional training prior to January 1, 1946, and 80 had completed their professional training since that date. Graduate level training was reported by 78 of the 120 speech correctionists and undergraduate level training by 40; two did not provide this information. Of the 120, 77 reported that they had had regular classroom teaching experience, 56 before receiving specialized training in speech correction, 21 after receiving such training. Thirty-nine indicated that they

had had no experience¹ as classroom teachers, and four did not submit relevant information.

In evaluating their own speech, four stated that they had previously had impaired speech and had received remedial speech instruction; two had received speech correction but reported no previous speech problem; two had previously had a speech problem but had received no remedial instruction. Only one reported that he had received speech correction and currently has impaired speech.

Those children with whom the 120 speech correctionists were working were, for the most part, receiving academic instruction in regular public school classrooms and were leaving their classrooms to receive remedial speech instruction. Approximately 20,600 children were receiving such instruction from the 47 participating teachers who gave this information. Of these children, 95 percent were reported by the participating teachers to have normal hearing. It is not known whether or not the 5 percent of children who were hard of hearing were receiving help in the correction of speech problems other than those associated with the hearing impairment. Many schools throughout the country provide special teachers for children who are hard of hearing and do not, therefore, depend upon the speech correctionist to serve these pupils.

Selected information concerning the levels at which they were working and the average time they were spending in various parts of their jobs are shown in Appendix Tables 1 and 2, which follow.

Table 1.—Grade Levels at Which the 120 Speech Correctionists were Working

Level	Number	Percent
Total.....	120	100
Nursery or kindergarten only.....	0	0
Nursery or kindergarten <i>and</i> elementary.....	21	18
Elementary only.....	31	26
Elementary <i>and</i> secondary.....	34	28
Secondary only.....	6	5
Nursery or kindergarten, elementary, <i>and</i> secondary.....	28	23

¹Of these, however, at least 26 had had student-teaching experience with normal children (see Table 6, page 47).

Table 2.—Average Percentage of Time Participating¹ Speech Correctionists Were Spending in Various Functions

Functions	Average percentage	Range of percentage	Standard deviation	Number spending no time
1	2	3	4	5
Speech correction with normally hearing children (including survey and diagnostic work, direct group and individual speech correction, conferences with classroom teachers, school administrators and parents).	84	16-100	17	0
Work with hard of hearing children (including speech reading, auditory training, audiometric testing and speech improvement).	6	0-45	8	25
General speech improvement with normally hearing children (including choral speaking, dramatics, group discussion, and public speaking).	4	0-43	8	69
Classroom instruction in the regular school subjects.	1	0-50	6	114
Supervision of other speech correctionists.	2	0-33	5	99
Other functions ²	3	0-49	8	77

¹Two of the 120 participating speech correctionists did not indicate how they distributed their time among these functions.

²Other functions enumerated by 41 of the speech correctionists included the following: work with pre-school children; work with parent groups; workshops for teachers; medical conferences; speech development with cerebral palsied children; talks to civic groups; other general community services.

APPENDIX C.—*Statistical Procedures and Results*

PROCEDURES USED IN ANALYZING DATA REPORTED IN TABLE 1

EACH OF THE 86 competencies (knowledges and abilities) listed in table 1 was rated in two ways by the 120 participating speech correctionists. First, they checked whether, in their judgment, each item was "very important," "important," "less important," or "not important" in their present positions as speech correctionists. Second, they checked whether they considered themselves 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 speech correctionists was computed in the same way, using a numerical value of 3.89 for "good," 2.52 for "fair," and 1.15 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 3.22. Then the standard deviation was found for this distribution; it was 0.92. 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 2.51. Then the standard deviation was found for this distribution; it was 0.67. The z-scores of the second distribu-

tion were equated to the corresponding z-scores of the first. For example, z-score for 3_a in the distribution of proficiency ratings was found to be $(3 - 2.51)/0.67$, which equals $+0.73$. Using the standard deviation of the first distribution as a unit, this yields $+0.73 \times 0.92$ or $+0.67$. Adding 0.67 to 3.22, the mean of the first distribution, yields 3.89. This is the "converted score" assigned to the checks in the "good" column.

A rank order of the list of 86 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 6, according to the rank order of importance; the rank order of proficiency is indicated by a rank order number in the right-hand column. For example, the number 8 appears opposite item 1 in the table. This item was ranked first in importance and eighth in proficiency. Rank order numbers and the range of average ratings of the 86 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.

<i>Category</i>	<i>Range of Average Ratings</i>	<i>Rank Order Numbers</i>
Very Important.....	3.51 - 3.94	1 - 31
Important.....	2.54 - 3.45	32 - 77
Less Important.....	1.52 - 2.32	78 - 86
Not Important.....	None	None
Good.....	3.21 - 3.85	1 - 51
Fair.....	1.90 - 3.19	52 - 85
Not Prepared.....	1.68	86

Covariation Between Ratings of Importance and Ratings of Proficiency

The hypothesis that speech correctionists 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 86. 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 2×2 tables, though several were computed from 3×2 , one from a 3×3 , and one from a 4×2 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 provides a useful reference-value for the evaluation of the contingency coefficient calculated from the original or empirical table.

The median coefficient of contingency on the 10 items was 0.31, with a range from 0.23 to 0.47 in a situation where the maximum possible value of the median coefficient of contingency would be 0.63 with a range from 0.45 to 0.73.

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 speech correctionist was determined ($I_1 - P_1$ through $I_{120} - P_{120}$, where the subscripts 1 through 120 represent the individual speech correctionists answering the question). The average difference between the ratings for all speech correctionists 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 $\left(\frac{\sigma_D}{\sqrt{N}}\right)$ were computed;

the average difference was expressed in z-score units $\left(\frac{M_D}{\sigma_{M_D}}\right)$ (this is the "critical ratio"). The probability of obtaining a difference as large as, or larger than, the observed difference if we continued 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 speech correctionist 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 speech correctionist for that item. His response to this item was therefore not usable in this calculation. The ratings of *all* speech correctionists 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, 31 showed a statistically significant difference between ratings of importance and proficiency. These are indicated in table 1, page 6, by the symbol "sd" in the right-hand column, and are discussed on page 33.

PROCEDURES USED IN ANALYZING DATA REPORTED IN TABLE 4

The 120 speech correctionists rated the relative importance of each of 22 experiences by checking whether, in their judgment, it was "very important," "important," "less important," or "not important" to include the experience in the specialized preparation of teachers of children who have speech handicaps. 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 of average ratings	Rank order numbers
Very important (3.50 or above)	3.52 - 3.80	1 - 8
Important (2.50 - 3.49)	2.62 - 3.46	9 - 22
Less important (1.50 - 2.49)	None	None
Not important (1.49 or under)	None	None

COMPARISON OF OPINIONS OF SPEECH CORRECTIONISTS PREPARED PRIOR TO AND SINCE JANUARY 1, 1946

The 120 inquiry forms were tabulated so that the responses of the 40 speech correctionists who had received their specialized preparation prior to January 1, 1946, could be compared with the responses of the 80 speech correctionists who had received their preparation since that date. The differences in opinion expressed by these two groups concerning the importance of the items listed in tables 1 and 4 were tested for statistical significance. For each item the average importance rating for the two groups was computed: $(M_1 = \frac{\sum fX_1}{N_1})$ where X_1 represents the ratings of importance of those prepared prior to January 1, 1946, and $(M_2 = \frac{\sum fX_2}{N_2})$ where X_2 represents the ratings of importance of those prepared since January 1, 1946. The estimated standard deviations of the universes of which X_1 and X_2 scores were samples were computed $(\hat{\sigma}_1 = \sqrt{\frac{\sum f x_1^2}{N_1 - 1}})$ and $(\hat{\sigma}_2 = \sqrt{\frac{\sum f x_2^2}{N_2 - 1}})$; 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").

Only in two cases were the differences in opinions between the two groups found to be statistically significant (using a probability of chance occurrence of 0.01 or less as the criteria for significance). The ability to carry on a speech-correction program at *both* the elementary and secondary levels was considered more important by those prepared since January 1, 1946, while

having a knowledge of the organization and operation of public school systems was considered more important by those prepared prior to January 1, 1946. (See Table 1, items 48 and 72.) No significant differences were found between the opinions of these two groups on the importance of any of the experiences in Table 4. The raw data, tabulated according to the foregoing categories, are on file in the Office of Education.

PROCEDURES USED IN ANALYZING DATA REPORTED IN GRAPH 1

The differences between the percent of "yes" (satisfied) responses of State personnel and of local personnel to the various questions in Graph 1 were tested for statistical significance. For the items tested, the "yes" responses in each of the two groups were expressed as a percent of all responses in the group (i.e., the "yes" responses of the State personnel to an item were expressed as a percent, p_1 , of all responses of State personnel to that item, and the "yes" responses of local personnel to the same item were expressed as a percent, p_2 , of all responses of local personnel to that item). The standard errors of the percentages (p_1 and p_2) were computed by the formulas, $\sigma_{p_1} = \sqrt{\frac{p_1 q_1}{N_1}}$ and $\sigma_{p_2} = \sqrt{\frac{p_2 q_2}{N_2}}$. In these formulas, $q_1 = 1 - p_1$ and $q_2 = 1 - p_2$. The standard error of the difference between the two percentages was determined by the formula, $\sigma_{p_1 - p_2} = \sqrt{\sigma_{p_1}^2 + \sigma_{p_2}^2}$. The observed difference between the percentages ($p_1 - p_2$) was expressed in z-score units $\left(\frac{x}{\sigma} = \frac{p_1 - p_2}{\sigma_{p_1 - p_2}}\right)$. The probability of obtaining a difference as large as or larger than the observed difference, if we continued to take samples of the same size from a zero-difference universe, was read from the appropriate table. Differences were considered to be significant if the probability of chance occurrence was 0.01 or less.

Table 3.—Evaluation of the Professional Preparation of Recently Prepared Speech Correctionists

QUESTIONS	SPEECH CORRECTIONISTS							
	State Personnel 1				Local Personnel 1			
	Yes	No	Undecided	Percent Checking	Yes	No	Undecided	Percent Checking
Average.....	2	3	4		5	6	7	
Range.....	51	32	17		53	27	20	
Do the recently prepared speech correctionists in your school system have adequate preparation, experience, and/or adequate understanding of:	29-70	16-49	7-24		23-78	8-64	12-28	
1. Basic orientation to the education of various types of exceptional children?	43	34	23		37	36	27	
2. Basic principles of child growth and development?	44	37	19		53	19	28	
3. Planning a curriculum suited to the individual needs and group needs of the pupils?	64	18	18		74	11	15	
4. Ascertaining and teaching at the appropriate developmental levels of their pupils?	68	16	16		64	12	24	
5. Planning with groups of pupils so each child participates according to his ability?	60	18	22		69	16	15	
6. Applying teaching methods used in their specialized area?	70 ²	20	10		78	8	14	
7. Applying teaching aids used in their specialized area?	70 ²	20	10		73	8	19	
8. Supervised student-teaching and observation in their specialized area?	53	27	20		62	26	12	

9. Developing and interpreting educational records?	62	28	10	47	32	21
10. Interpreting educational and psychological reports and case histories?	49	43	8	51	31	18
11. Making use of medical reports?	49	43	8	67	20	13
12. Group intelligence and achievement testing?	51	26	23	39	33	28
13. Identifying causes of social and emotional maladjustment?	29	47	24	46	31	23
14. Agencies concerned with speech handicapped children and how to secure their services?	39	41	20	31	45	24
15. Services provided for speech handicapped children by speech, psychological, medical, and other clinics?	40	43	17	36	42	22
16. Classroom teaching with so-called normal children	44	49	7	23	64	13

¹A total of 155 special educators with some responsibility for the administration or supervision of speech-correction programs in their school systems gave opinions: 64 directors and specialists in State departments and 91 directors and supervisors in local school systems.

²Questions 6 and 7 and questions 10 and 11 were combined on the inquiry form sent to State department personnel. Their replies have been used twice to afford comparison with the replies of local personnel. However, each of these was used only once in computing the average of the "yes," "no," and "undecided" responses.

APPENDIX D.—Excerpts from Inquiry Forms

I. EXCERPTS FROM INQUIRY FORM FILLED OUT BY SPEECH CORRECTIONISTS

The Office of Education Study

"Qualifications and Preparation of Teachers of Exceptional Children"

INQUIRY FORM EXC-4J: For Teachers of Speech Handicapped Children

IN PUBLISHED REPORTS, OPINIONS EXPRESSED THROUGH
THIS INQUIRY WILL NOT BE IDENTIFIABLE WITH THE
NAMES OF THE PERSONS COMPLETING THE FORM

Miss.....

Mrs.....

- 1.1 Your name Mr..... Date.....
- 1.2 Your mailing address.....
City (or Post Office)..... State.....
- 1.3 Name and address of school organization in which you teach.....
- 1.4 Indicate the type of position you hold by checking ONE of the following:
 Itinerant speech correctionist serving one or more regular schools.
 Speech correctionist at a day school for crippled children.
 Speech correctionist in a clinic. If so, specify type:.....
 Other (specify):.....
- 1.5 Indicate your case load for speech correction by filling in the blank:
_____ Number of speech handicapped pupils on your roll at the *present time*
with whom you are working directly.
- 1.6 Approximately what percentage of your case load is normally hearing? _____
Hard of hearing? _____
- 1.7 Indicate the group or groups of pupils to whom you provide speech correction
by checking ONE or MORE of the following:

- _____ Nursery or kindergarten. _____ Elementary. . . _____ Secondary.
- 1.8 Indicate the period in which you took the *major* part of your specialized preparation which led to your initial certification or approval as a speech correctionist by checking \checkmark ONE of the following:
 _____ Prior to December 31, 1945. _____ Since January 1, 1946.
- 1.9 Did you take the *major* part of your specialized preparation at the _____ undergraduate level or _____ graduate level?
- 1.10 Did your specialized preparation consist largely of work taken during _____ the regular academic year or _____ summer school and extension courses?
- 1.11 Have you had regular classroom teaching experience? . . . Yes _____ No _____
 If "yes," did you do your classroom teaching *before* taking specialized preparation in speech correction? . . . Yes _____ No _____
- 1.12 Have you a speech defect? Yes _____ No _____
- 1.13 Have you had a speech defect? Yes _____ No _____
- 1.14 Have you ever had speech correction yourself? Yes _____ No _____
- 1.16 Please estimate roughly the approximate percentage of time which you spend at each of the functions listed below. (Total to equal 100 percent.)
- _____ (1) *Speech correction with normally hearing children*, including survey and diagnostic work; direct group and individual speech correction; conferences with classroom teachers, school administrators and parents.
- _____ (2) *Work with hard of hearing children*, including speechreading, auditory training, audiometric testing and speech improvement.
- _____ (3) *General speech improvement with normally hearing children*, including choral speaking, dramatics, group discussion and public speaking.
- _____ (4) Classroom instruction in the regular school subjects.
- _____ (5) Supervision of other speech correctionists.
- _____ (6) *Other* (specify — speech development with cerebral palsied, community services, etc.):
- _____ 100 Total.

SPEECH CORRECTIONISTS

3 In your present position as a speech correctionist, 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 1	Good	Fair	Not prepared
				<p>A knowledge and/or understanding of —</p> <p>3.1 Philosophical concepts underlying present-day education.</p> <p>3.2 Organization and operation of public school systems.</p> <p>Classroom teaching methods —</p> <p>3.3 At the nursery school and kindergarten level.</p> <p>3.4 At the elementary level.</p> <p>3.5 At the secondary level.</p> <p>The ability —</p> <p>3.82 To contribute to community leadership in establishing, developing and interpreting the speech correction program to the general public.</p> <p>3.83 To interpret diagnostic speech and hearing tests and the findings of specialists to classroom teachers and parents, so that appropriate activities can be planned.</p> <p>3.84 To help parents understand their child's speech problems and personal attitudes.</p> <p>3.85 To aid parents in obtaining medical advice and care for children with speech and/or hearing problems.</p> <p>3.86 To work with so-called normal children in helping them accept pupils with speech problems.</p>			

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

4. Please answer the following questions relative to the program of specialized preparation which was offered by the institution at which you received the major part of your specialized preparation which led to your initial certification or approval as a speech correctionist.

(Check in ONE of the three columns on the right in answering each of the following questions. LEAVE BLANK THOSE EXPERIENCES YOU DID NOT HAVE.)

ITEM	Yes	No	Undecided
<i>Was there undue repetition and overlap of content —</i>			
4.2 In the general cultural courses ² (history, English, science)?			
4.3 In the general teacher-education courses?			
4.4 In the specialized courses in speech correction?			
4.5 Do you believe that you received <i>too much</i> theory and <i>not enough</i> supervised practical experience in speech correction?			
4.6 Do you believe that you received <i>too much</i> supervised practical experience and <i>not enough</i> theory in speech correction?			
4.7 Did you receive <i>too much</i> of your supervised practice in speech correction in a clinic and <i>not enough</i> in a school system?			
4.8 Did you receive <i>too much</i> of your supervised practice in speech correction in a school system, and <i>not enough</i> in a clinic?			

5. Do you consider the following experiences "very important," "important," "less important" or "not important" in the specialized preparation of speech correctionists? (Check ONE of the four columns on the left for each item.)

Very important	Important	Less important	Not important	ITEM
				5.1 Supervised observation of regular classroom teaching of pupils at different grade levels.
				5.2 Supervised student-teaching in regular classrooms (not speech correction)
				5.3 Student-teaching in speech correction in a school system under the supervision of a qualified speech correction teacher
				<i>Supervised student-teaching in speech correction in a school system —</i>
				5.4 With individual cases.
				5.5 With groups of speech-handicapped pupils
				5.6 At the nursery-school or Kindergarten level.
				5.7 At the elementary-school level.
				5.8 At the secondary-school level.

SPEECH CORRECTIONISTS

Very important	Important	Less important	Not important	ITEM	Too much	About right	Too little	None at all
				<i>Supervised practice in speech correction at a speech clinic —</i>				
				5.9 With individual cases				
				5.10 With groups of speech handicapped.				
				<i>Supervised clinical practice —</i>				
				5.11 In individual diagnosis of speech disorders.				
				5.12 In individual testing of hearing with the pure-tone audiometer.				
				<i>Supervised practice in speech development —</i>				
				5.13 With the cerebral palsied.				
				5.14 With the so-called aphasic child.				
				<i>Supervised student-teaching with the hard of hearing —</i>				
				5.15 In lipreading (speechreading).				
				5.16 In auditory training.				
				5.17 In speech development.				
				5.18 Visits to the homes of children with speech problems in the company of supervising teachers.				
				<i>Experiences in drawing interpretations from —</i>				
				5.19 Otological, orthodontal and other medical reports.				
				5.20 Psychological reports.				
				5.21 Reports of social workers.				
				5.22 Case records on speech handicapped pupils.				

7. Indicate (1) the amount of student teaching in a school speech-correction program and (2) the amount of practice in a speech clinic that you believe should be *minimal, desirable* and *ideal* prerequisites for a school speech correctionist. (Place ONE check \checkmark in each of the eight columns opposite the appropriate amount.

AMOUNT	Student Teaching in School Speech Correction Program			Amount You Had	Clinical Work with Speech Handicapped			Amount You Had
	Minimal	Desirable	Ideal		Minimal	Desirable	Ideal	
None.....								
1 - 75 clock hours.....								
76 - 150 clock hours.....								
151 - 225 clock hours.....								
226 - 300 clock hours.....								
301 - 375 clock hours.....								
376 - 450 clock hours.....								
Other (specify):								

8. If you consider *regular* classroom teaching of some importance, indicate (1) the amount which you believe should be *minimal*, *desirable* and *ideal* prerequisites for a speech correctionist in a school system, and (2) the amount of classroom teaching which you have had.
(Place ONE check in each of the four columns opposite the appropriate amount.)

Amount of Regular Classroom Teaching	Minimal	Desirable	Ideal	Amount You Had
At least one semester of half-time student teaching.....				
At least one semester of full-time student teaching.....				
At least 1 year of on-the-job classroom teaching.....				
At least 2 years of on-the-job classroom teaching.....				
At least 3 years of on-the-job classroom teaching.....				
Other (specify):				

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

II. EXCERPTS FROM INQUIRY FORMS FILLED OUT BY (A) DIRECTORS AND SUPERVISORS IN STATE DEPARTMENTS OF EDUCATION AND (B) DIRECTORS AND SUPERVISORS IN LOCAL SCHOOL SYSTEMS.

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-3: For Directors, Coordinators, Consultants, and Supervisors of Special Education in *Local* School Systems.

IN PUBLISHED REPORTS, OPINIONS EXPRESSED THROUGH THIS INQUIRY FORM WILL NOT BE IDENTIFIABLE WITH THE NAMES OF THE PERSONS COMPLETING THE FORM.

Miss.....
Mrs.....

1.1 Your name Mr..... Date.....

1.2 Your business address.....
City (or Post Office)..... State.....

1.3 Your official title.....

(Specify - Director of Special Education, 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"/> Gifted | <input type="checkbox"/> Socially Maladjusted ² |
| <input type="checkbox"/> Crippled ¹ | <input type="checkbox"/> Hard of Hearing | <input type="checkbox"/> Special Health Problems ² |
| <input type="checkbox"/> Deaf | <input type="checkbox"/> Mentally Retarded | <input type="checkbox"/> Speech Defective |
| | <input type="checkbox"/> Partially Seeing | |

Throughout the inquiry form:

¹The term "crippled" includes the cerebral palsied.

²The term "socially maladjusted" includes the emotionally disturbed.

³The term "special health problems" includes children with cardiac conditions, tuberculosis, epilepsy, and below-par conditions.

4. (Completed by State Personnel only.)

How do you evaluate, in general, the professional preparation of "teachers of exceptional children" employed in your State who, within the last 5 years, have completed a sequence of courses of specialized preparation? ¹

(Answer the following questions by placing +, 0, or - in the respective columns for each area you complete, according to the following key.)

+ = yes, 0 = uncertain or undecided. - = no.

	Blind	Crippled	Deaf	Gifted	Hard of Hearing	Mentally Retarded	Partially Seeing	Soc. Maladjusted	Spec. Health Probs.	Speech Defective
Do you believe these recently graduated special education teachers have had sufficient experience —										
4.1 In classroom teaching with so-called normal children?										
4.2 In supervised student-teaching and observation in their specialized area?										
Do these teachers have adequate preparation —										
4.3 In developing and interpreting educational records?										
4.4 In interpreting psychological and medical reports?										
4.5 In diagnosing causes of social and emotional maladjustments?										
4.6 In group intelligence and achievement testing?										
Do these teachers have an adequate understanding —										
4.7 Of the basic principles of child growth and development?										
4.8 Of methods and teaching aids used in their specialized area, and how to apply these to their teaching?										
4.9 Of the relationship between general and special education?										
4.10 Do these teachers have the ability to plan with groups of pupils so as to provide for group participation according to each child's abilities?										
4.11 Do these teachers have the ability to plan a curriculum suited to the individual and group needs of their pupils?										

See footnote at end of table.

ITEM	Blind	Crippled	Deaf	Gifted	Hard of Hearing	Mentally Retarded	Partially Seeing	Soc. Maladjusted	Spec. Health Probs.	Speech Defective
4.12 Do these teachers, upon graduating, have a working knowledge about agencies concerned with exceptional children, the services they offer, and how to secure these services?										
4.13 Are these teachers, upon graduating, sufficiently familiar with the services provided for exceptional children by speech, psychological, and medical clinics, and so on?										
4.14 Do these teachers have an adequate basic orientation to the education of various types of exceptional children?										
4.18 Are these teachers able to ascertain and to teach at the appropriate developmental levels of their pupils?										

The definition of a "sequence of courses" which appears on page 5 of the 1949 publication, Opportunities for the Preparation of Teachers of Exceptional Children (a cooperative study sponsored by the National Society for Crippled Children and the United States Office of Education) has been adopted for use throughout this study. A "sequence of courses" involves 9 to 12 semester hours made up of (1) a study of the characteristics of the particular condition under consideration, (2) a study of teaching methods and curriculum adjustment, and (3) observation and student teaching in the specialized area.

SPEECH CORRECTIONISTS

4. (Completed by Local Personnel only.)

How do you evaluate, in general, the professional preparation of "teachers of exceptional children" employed in your school system who, within the last 7 years, have completed a sequence of specialized preparation leading to initial certification or approval?

Answer the following questions for the areas in which you have responsibility by placing +, O, or - in the respective columns for each area you complete, according to the following key:

- + = yes, O = uncertain, undecided or no clear trend (half and half)
- = no.

ITEM	Blind	Crippled	Deaf	Gifted	Hard of Hearing	Mentally Retarded	Partially Seeing	Soc. Maladjusted	Spec. Health Probe	Speech Defective
Do you believe these recently graduated special education teachers have had sufficient experience —										
4 1 In classroom teaching with normal children?										
4 2 In supervised student-teaching and observation in their specialized area?										
Do these teachers have adequate preparation —										
4 3 In developing and interpreting educational records?										
4 4 In interpreting educational and psychological reports and case histories or records?										
4 5 In making use of medical reports?										
4 6 In identifying causes of social and emotional maladjustments?										
4 7 In group intelligence and achievement testing?										
Do these teachers have an adequate understanding —										
4 8 Of the basic principles of child growth and development?										
4 9 Of teaching methods used in their specialized area, and how to apply these to their teaching?										
4 10 Of the teaching aids and equipment used in their specialized areas and how to apply these to their teaching?										
4 11 Do these teachers have the ability to plan with groups of pupils so as to provide for group participation according to each child's abilities?										
4 12 Do these teachers have the ability to plan a curriculum suited to the individual and group needs of their pupils?										
4 13 Do these teachers, upon graduation, have an adequate working knowledge about agencies concerned with exceptional children, the services they offer, and how to secure these services, when they enter the field?										
4 14 Do these teachers, upon graduation, have sufficient familiarity with services provided for exceptional children by speech, medical, psychological, and other clinics?										

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