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Teachers of Crippled Children

AND

Teachers of Children With Special Health Problems

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

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

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Foreword

THIS PUBLICATION is one of a series resulting from the broad study, *Qualification and Preparation of Teachers of Exceptional Children*, conducted by the Office of Education in cooperation with many leaders in the education of exceptional children and youth in the United States. Approximately 2,000 persons have contributed to the total project.

Reported here is that part of the information from the overall study which has particular bearing on the qualification and preparation of teachers of children with crippling conditions and teachers of children with special health problems. Because of the close relationship between these two areas, it was decided to present the findings in this one publication. Other reports from the study are listed on the inside of the back cover.

It is hoped that this publication will prove useful to present as well as to prospective teachers of children with crippling conditions or special health problems. It should also be helpful to those concerned with professional standards and college curricula in these two areas. Further, it is hoped that this report will stimulate additional discussion and research on the part of those interested in improving educational programs for the Nation's children who are crippled or who have special health problems.

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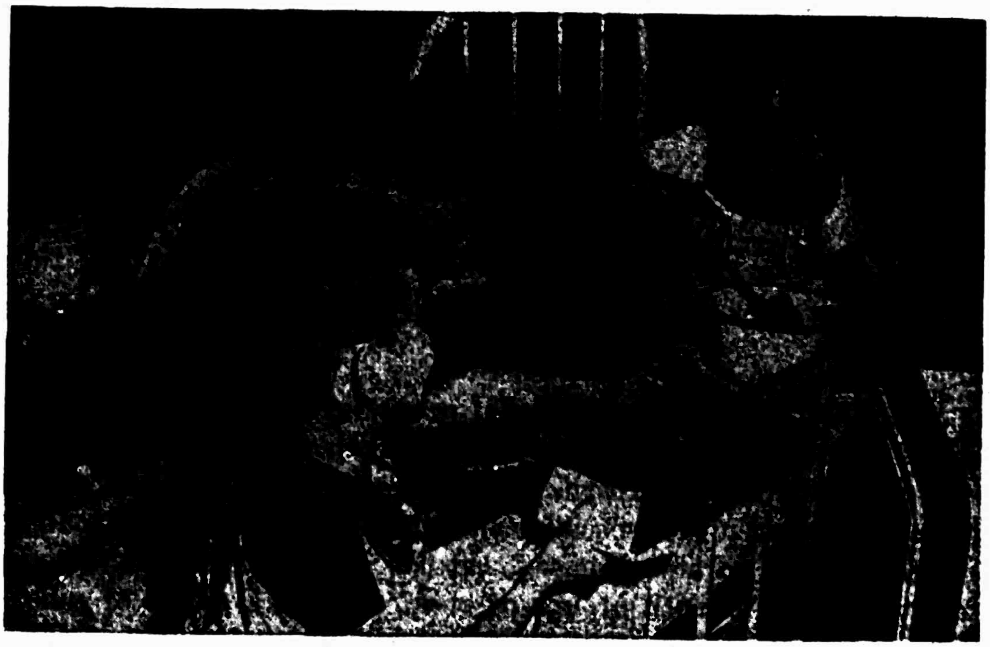
- The Association for the Aid of Crippled Children for its special cooperation throughout the entire study.
- The members of both the National Advisory and the Policy Committees.
- The members of the committee on competencies needed by teachers of children who are crippled and the committee on competencies needed by teachers of children with special health problems. Their reports comprise a principal portion of this publication.
- The 150 teachers of crippled children and the 85 teachers of children with special health problems who completed extensive inquiry forms. Their responses provided a major part of the data upon which this report is based.
- The educators who assisted in the development and pretesting of items contained in the inquiry form.
- Herbert S. Conrad, former Director of Research and Statistical Services Branch of the Office of Education, for the part he has played in planning and executing this project, and for the services rendered by Mrs. Mabel C. Rice and other members of that branch in preparing some of the statistical data.
- Naomi Nehrer, Lynell Littlefield, Albert Pelley, and Ann Stevenson Berman of the Exceptional Children and Youth staff who assisted in the preparation of the data.

Introduction

HISTORICALLY, educational programs for crippled children were designed to serve mainly those with orthopedic disabilities, such as poliomyelitis, arthritis, or congenital malformations. Programs for children with special health problems were designed mainly for those with chronic illnesses, cardiac conditions, or pulmonary tuberculosis. For both groups of children, several types of school programs have been necessary. Some children are so handicapped, at least for a part of their lives, that education must be brought to them either in a hospital or in their homes. Others can attend special day schools or classes where adaptations are made, not only in curriculum, but also in transportation, housing, and other facilities. Still others, with specialized supervision and necessary program modification, can spend all or part of their day in regular day school classes.

Over the years medical findings, expansion of educational opportunities for exceptional children, and changing social attitudes have affected the scope of the programs. For example, children with cerebral palsy and other neurological impairments are increasingly being included in school programs for crippled children. Currently, the differentiation between the categories "crippled" and "special health problems" is not completely clear. It was decided, however, to use these two categories separately in collecting data for the broad study, *Qualifications and Preparation of Teachers of Exceptional Children*, but because of the many similarities and possible overlapping between them, the findings are reported in one publication.

This study was undertaken during a period of rapid growth in educational programs for exceptional children. Recent statistics collected by the U.S. Office of Education indicate that in February 1958 about 862,000 handicapped and gifted pupils were enrolled in special education programs in local public school systems. Of this number, some 55,000 were children with crippling conditions or special health problems. Comparison of the number of communities providing



State Department of Education, Hartford, Conn.

Cookie-making is one of many learning activities that may be provided for hospitalized children by imaginative teachers.

special education in these two areas of exceptionality reveals considerable expansion between 1948 and 1958—approximately 40 percent in the area of crippling conditions and 105 percent in the area of special health problems. Shortages of qualified teachers and unprecedented demands on teacher preparation institutions have focused attention on such questions as: What specialized competencies are needed to effectively teach children who are crippled? What specialized competencies are needed to teach children with special health problems? What experiences in professional preparation are most likely to develop these competencies? The study reported here is essentially an exploratory, opinion-type study designed to bring together the thinking of experienced special educators throughout the Nation on some of these crucial questions.

Two techniques were employed to gather data for the study.[1] One was the preparation of statements by a committee of specialists in each area of exceptionality; the other, the use of a series of inquiry forms.

A committee of specialists in the education of crippled children contributed a report on competencies needed by teachers in that area. Similarly, a committee of specialists in the education of children with special health problems compiled a report of needed teacher competencies in that area.

[1] See appendix A for a more complete description of the study plan.

Separate and distinct inquiry forms[2] were completed by teachers of children who are crippled, by teachers of children with special health problems, by directors and specialists in State departments of education, by directors and supervisors in local school systems, and by staff members in colleges and universities. Opinions of these supervisory personnel and college staff members are included here only when they reported responsibility in the areas of education of crippled children or children with special health problems.

Since a large part of this report is based on teacher opinion, the reader may want to know more about this group of participating special educators and how they were selected.[3] In order to secure a sample of at least 100 teachers of crippled children and 100 teachers of children with special health problems, it was decided to compile a list of approximately 200 in each area. Names were supplied by State departments of education on the basis of a quota established by the Office of Education. Criteria for participation specified that a teacher must be superior in the eyes of his supervisor and have had professional preparation for work in the specialized area. It was also suggested that teachers be selected to represent a cross-section of types of special education programs in both rural and urban areas. About half of the teachers were to have received their professional preparation before January 1946 and half since that date.

Of the 150 participating teachers of crippled children, 110 were teaching in special day schools or classes and 40 in hospitals, convalescent homes, or sanitariums. Inquiry forms were also completed by teachers of crippled children enrolled in home instruction programs, but there were too few to be included in the study. Of the 85 participating teachers of children with special health problems, 26 were teaching in special day schools or classes, 26 in hospitals, convalescent homes, or sanitariums, and 33 in home instruction programs. All grade levels from nursery through secondary are represented by the teachers, but the majority were teaching elementary pupils. The teachers of crippled children were working predominantly with those who had cerebral palsy or an orthopedic problem, although they also numbered among their pupils children with special health problems, such as cardiac conditions. Similarly, teachers of children with special health problems were working primarily with those who had such conditions as malnutrition, nephritis, tuberculosis, diabetes, cardiac

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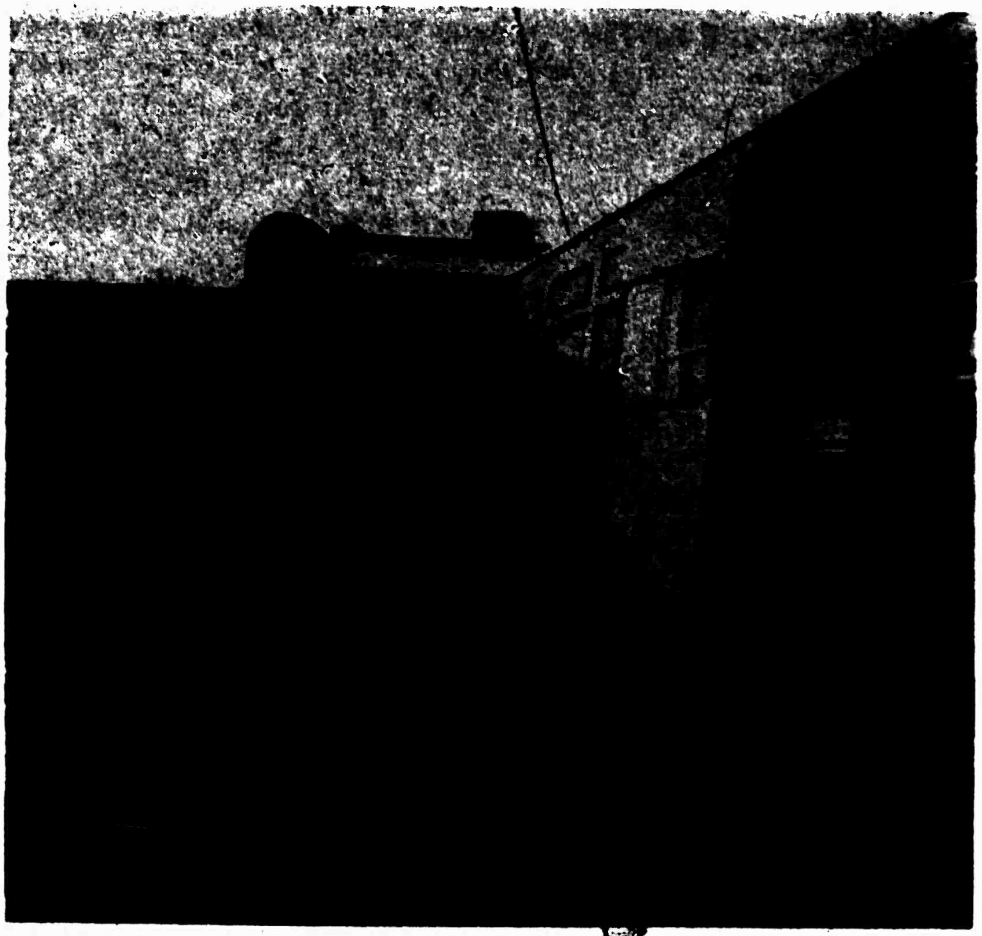
[2] See appendix D, page 106, for excerpts from inquiry forms.

[3] See appendix B, page 89, for a more detailed description of the sampling procedure, criteria used to select teachers, and additional information about the background and teaching situations of the participating teachers.



Public Schools, Fairfax County, Va.

A specially equipped bus makes it possible for a handicapped boy to go to school.

conditions, or epilepsy. But they also reported children with various orthopedic problems among their pupils.

The first section of this publication includes the two competency committee statements and the competency evaluations made by teachers of children who are crippled and by teachers of children with special health problems. The second section combines a report of the teachers' self-appraisal on each of the competencies in their respective area list and an evaluation by State and local supervisory personnel of the effectiveness of recently prepared teachers of crippled children and of children with special health problems. The third section brings together the opinions of all four groups of special educators on experiences in professional preparation which contribute to the development of these needed competencies. The fourth and final section consists of a brief summary of the findings and some of their implications for special educators working in these two areas of exceptionality.

Competencies Needed by Teachers

THE MAJOR FOCUS of this publication is on distinctive competencies—knowledges, understandings, and abilities—needed by teachers of crippled children and by teachers of children with special health problems. Two methods, previously described, were used to study competencies: committee reports and teacher evaluations. Rather than reflect existing standards or college curricula, the committees were to identify and describe competencies which would represent more or less ideal qualifications. They were not to include those knowledges or abilities needed by regular classroom teachers. In contrast, participating teachers were to keep their daily working situations in mind as they evaluated a structured list of competencies included in the inquiry forms. Teachers of crippled children rated 103 knowledges and abilities specific to their area of exceptionality; teachers of special health problems rated 85 specific to their area. These two lists were prepared by the study staff, with the assistance of specialists, but were made independently of the competency committees.

A study of the findings, based on these two sources of data, indicates that the opinions of specialists and teachers tend to reinforce each other and that a wide range of distinctive competencies are needed for effective and successful teaching with either crippled children or children with special health problems. In some cases the importance of a competency was stressed for work in a particular setting, such as day class, home, or hospital program.

In this section, the committee report on competencies needed by teachers of *crippled* children is presented first, followed by the competency evaluations made by teachers of these children. Next is presented the committee report on competencies needed by teachers of children with *special health problems*, followed by the competency evaluations made by teachers of these children.

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Committee Report on Competencies Needed to Teach Children Who Are Crippled

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(*Titles of committee members are shown on pages III–IV.*)

The opinions of this committee are based on the assumption that a competent teacher of crippled children will have a background of successful teaching experience with nonhandicapped children to provide an appreciation of normative child development, of regular school operation, and of the role of various school and nonschool personnel in the educational program. This report will therefore focus on necessary teacher competencies different in degree or kind from those required by regular classroom teachers.

Teachers of children with crippling conditions need specific competencies in the following broad areas: *technical knowledge* of the physical deviations typically found among these pupils and the educational implications of specifically prescribed treatment; ability to *help children in personal adjustment* at home and in school, and in looking ahead to employment possibilities; skill in *modifying curriculum and adapting materials* for a child's maximum learning; and understanding the educational implications of records and reports of various specialists. Essential also is ability to work as a *team member* in interdisciplinary activities with medical personnel, psychologists, social workers, and others in a number of settings, including the hospital, the child's home, and school units. Too, the unique teaching situations in which the teachers find themselves as well as the crippling conditions of the pupils point to somewhat distinctive *personal qualifications* if the child is to benefit from a total program of education and care.

Technical Knowledge

Of particular importance to the teacher is knowledge of the educational implications of various crippling conditions. Since there is so much variation in the causes of crippling conditions, the teacher may find in one classroom children with orthopedic handicaps, neurological impairment, or even some special health problems. He will need to

understand the nature and effects of these conditions on individual children. For example, teachers should be required to have knowledge about conditions in which a child's vitality is lessened. Important in planning is the ability to interpret the educational significance of special medical problems which sometimes include postsurgical recuperation, malnutrition, cardiac conditions, asthma, and certain allergies. Without this kind of knowledge and understanding of each child, errors might be made such as overlimiting him, setting unrealistic goals, or selecting otherwise counter-indicated activities.

The teacher will need to understand the general course of treatment and the prognosis for each child. Understanding the medical diagnosis also entails the teacher's awareness of the interrelatedness of multiple disabilities in a child. Although a motor handicap is generally the distinctive feature of children classified as crippled, the teacher may find in his pupils varying combinations of visual defects, auditory handicaps, speech and language disturbances, perceptual deficiencies, mental retardation, convulsive disorders, or emotional involvements. Needed also is acquaintance with principles of cerebral dominance and the establishment of eye, hand, and foot laterality which have implications for educational planning.

Also required of the teacher is an understanding of the function and correct use of prescribed braces and special equipment such as standing tables or relaxation chairs. He is expected to have knowledge that will enable him to cooperate in using corrective devices such as eye patches, splints, sand bags, or other easily adjusted appliances.

Fostering Security and Satisfaction for Each Child

Although the distinguishing characteristics of crippled children are chiefly physical, the teacher must be prepared to recognize the *significant* psychological and social problems of their pupils. No specific emotional or personality type is directly associated with a particular crippling disability. However, emotional maladjustment or personality deviation frequently occurs because of environmental pressures or faulty mental health principles practiced by parents, other adults, and peers influencing the crippled child and because of the direct effects of the handicap on the child's activities. For example, intense feelings of inadequacy or demanding attitudes may result from such parental reactions as rejection or overprotection, or from peer and community nonacceptance.

The teacher needs expertness in helping to alleviate, when indicated, children's social or emotional problems. Teacher sensitivity and ability to anticipate situations which will demand adjustment on

the part of the child will often enable him to prevent problems. At a premium is teacher ability to know the child as an individual and to gain his confidence. Teachers also need awareness and acceptance of their own professional strengths and limitations in guidance and counseling, and need to know sources and means of obtaining aid from appropriate specialists. To ensure maximum benefits, teacher skill in implementing recommendations from these specialists is vital.

Teachers of crippled children need appreciation of the sociological implications inherent in helping children live better lives at home and in school. To provide productive and satisfying experiences for crippled children, it is important for the teacher to understand the relationships of the pupil to his family and to community members. Valuable, too, is appreciation of some of the family's problems as they reflect on the child's school behavior and progress. For those in residential schools or hospitals, it is necessary to consider the curriculum not only in terms of the immediate environment but also in terms of the child's projected life with his parents. If these two environments represent diverse values, socioeconomic levels, and customs, teacher skills in lessening tension and divided loyalties are valuable.

Competencies of high importance for the *teacher of the homebound* include a sincere respect and appreciation for family life in various cultural patterns or economic levels. The teacher should be prepared to utilize the many opportunities to work with parents in helping to provide maximum educational opportunities for their child at home. Important to this teacher is skill in securing the parent's cooperation in fostering continued independent study.

Curriculum Adjustment and Special Materials

The teacher needs competence in working with children with a wide range of intellectual, social, and physical abilities and a variety of limitations. Many crippled children, because of long or intermittent absences from school, severe physical involvement, intellectual giftedness, educational retardation, mental retardation, conceptual and/or perceptual involvements, or emotional maladjustment, will require special programming skills on the part of the teacher. Important among these is the ability to select curriculum content most appropriate to his pupils and to adapt it to their present as well as future needs. In the process of curriculum development, the teacher needs skill in identifying stages of development, in recognizing need for sensory reinforcement, and in choosing learning situations and activities structured to help the children toward as much normalcy as

possible. He needs to know how to use the curriculum to develop the personal, intellectual, and social capacities of crippled children. For a comprehensive school program, the teacher at the secondary level should know how to develop a well-rounded intellectual, social, and prevocational program.

Arranging a multigrade school program to provide group experiences as well as individualization for each crippled child requires unusual teacher skill. Even with a chronological age range of only 2 or 3 years, children in any given group may have a wider than usual scatter of mental and physical abilities as well as educational achievement. To provide opportunity for participation in common activities, the teacher needs skill in making major modifications for those who, for example, may be gifted or severely handicapped.

In order to provide challenging and satisfying school experiences the teacher needs skill in arranging for activities in which children with various and divergent abilities can be independently but productively engaged while he is giving individual or small group instruction. Competence in this kind of classroom management will result from a rich background of selecting, adapting, and creating educational materials and activities for the children's independent use.

Teachers of crippled children, particularly those working in home instruction or hospital programs, need to bring to their pupils a rich supply of both first-hand and vicarious experiences through such means as audiovisual aids, creative expression through various media, and special activities. Important is ability to provide, when feasible, opportunities for field trips in the community or around hospital grounds as well as other experiences to help prevent feelings of isolation or inertia. The teacher must know how to establish and maintain continuity with the world beyond the child's restricted environment. For example, skill and ingenuity are required in helping homebound children associate profitably with other children on home instruction, with other children in the neighborhood, or with children in the local school with which his school program may be affiliated.

Since a child with crippling conditions is often transferred from hospital school, to home instruction, to a school classroom, his teacher will require skills in easing the necessary adjustments. For such a mobile population, the teacher needs expertness in developing the curriculum to meet not only a child's immediate educational needs, but to prepare him for participation in the group to which he will return regardless of the length of his absence.

Records and Reports

The teacher of crippled children has a more than usual need for skill in using records and reports. Not only will he have occasion to interpret the usual educational records, but also to read and interpret reports from medical, psychological, social work, and other professional persons concerned with these children. He needs to be able to assume responsibility for educational diagnosis based on interpretation of reports and cumulative records, and upon his own observations of children under various conditions. For example, he should be aware of the impact on learning of concept-percept dysfunction of the child with neurological damage. For additional insight and direction, the teacher needs to be able to record his own observations and conclusions and to communicate these clearly for consideration by other staff members.

Ability to use psychological and social case work reports is important in distinguishing between educational retardation and mental retardation. The teacher needs an awareness of the educational results of such factors as prolonged and intermittent periods of hospitalization and convalescence, transferring from one school system to another, or living in unfavorable economic or environmental conditions. A teacher of crippled children should be able to interpret the norms of child development in relation to the mental and social age of each child regardless of his chronological age. He needs an understanding of the intellectual functioning of children and its dependence on environmental factors as well as innate endowment. He is also expected to understand that the degree of mental retardation, if any, must be established by competent psychological testing and that psychometric scores are to be supplemented by interpretation of the child's mental functioning and behavior through observation and measurement of performance, social maturity, academic achievement, reading disability, emotional adjustment, personality, and other factors.

Working as a Team Member

Regardless of whether children with crippling conditions may be in special classes or schools, convalescent homes or hospitals, or confined to their homes, the teacher will be fully effective only if he is able to cooperate with medical, psychological, general health, nursing, and social service personnel. He should have a knowledge of the contribution of each member of the *rehabilitation team* and skill in participating in interdisciplinary conferences dealing with child evaluation and program planning. The teacher must be prepared to adjust

the school's schedule, when necessary, to permit the child to receive occupational, physical, or speech therapy or psychological service.

Teachers of crippled children need to be able to recognize significant indices of change in the child's physical, mental, social, and emotional functioning. Early recognition of such changes and referral to appropriate specialists will not only result in the necessary attention from these other specialists but will enable the teacher to provide an educational program related to the child's immediate needs.

The role of the teacher in working with *parents* is important since the success of a child's educational program is so dependent upon cooperation between parents and teacher in the development of a total program. In working with parents, the teacher is usually only one of a number of professional persons concerned with the total welfare of the child. All staff members must work cooperatively if they are to help the child and his parents in realistic planning.

The teacher will often be called upon to interpret a child's educational problems, his school progress and recommended program modifications to parents and to others concerned with his program. An effective teacher will also be able to glean implications for the school program from visits and conversations with a child's parent.

If a teacher is aware of State and local sources of information regarding the handicapped, such as publications or parent study groups, he will be able to direct parents and others to these resources when it seems advisable.

The teacher of crippled children needs skill in working with various *auxiliary school personnel*, such as bus drivers, attendants, secretaries, lunchroom personnel, maintenance staff, and matrons or classroom aids. Since many of these people are not professionally trained, but have close relationships with the pupils under their care, the teacher must be prepared to help them understand and work with the children. The competent teacher will have the ability to interpret each child's needs and explain why certain procedures may be necessary. In turn he will interpret their work to the children so that they will not impose upon these assistants, but will develop an appreciation for the services they render.

Working With Community Agencies and Organizations

Knowledge and understanding of community resources and services available to crippled children, and the channels through which these can be utilized is of particular importance to the special teacher. Public and private agencies providing health, welfare, recreational, and vocational services are among those with which the teacher of

crippled children should be familiar. He needs to know the national, State, and local structure of each; their scope and areas of responsibility; and their organization, policies, and procedures. It is also helpful for him to be acquainted with the functions and policies of voluntary organizations and professional groups. Closely related to this is a knowledge of how to work with volunteers, men's and women's groups, and civic, fraternal, and service clubs. This involves an awareness of techniques of community organization and the ability to work cooperatively with others in the development as well as the utilization of community services.

Personal Characteristics

Among the most important personal qualifications needed by a teacher of crippled children is a positive attitude toward his chosen career. He should have a special desire to teach in this area and should understand the reasons for making his choice. In demand are teachers who are eager to acquire, and to keep up to date, the special skills and bodies of knowledge so essential for success in this relatively new aspect of education.

Also necessary to the teacher of crippled children is extraordinary physical stamina. During a given school day, he may be called upon to help children in and out of wheel chairs, pick up crutches, adjust braces, move classroom equipment about, and assist with the school lunch. An increasing number of schools, fortunately, are employing extra personnel for some of the nonteaching services.

Teachers of crippled children have always had to be extremely flexible and resourceful. Recent trends indicate that these resilient qualities of personality will be needed even more in the future. Improved medical procedures are reducing the amount of time that children must spend in any one special education program. The teacher comes into contact with more children during a given school term; he has less time to establish rapport and to plan the individualized curriculum that is needed by each child. Too, in the child's daily schedule there are an increasing number of interruptions resulting from the various therapies—physical, occupational, speech—which are properly regarded as essentials in a well-rounded program for the crippled. The teacher must be prepared to take in stride these interruptions in addition to those created by numerous visitors, ranging from local PTA members to distinguished travelers from abroad. The resourceful teacher will, however, be able to carry forward the program of instruction and when possible to capitalize on these irregularities by making them a part of the curriculum.

Public Schools, Richmond, Va.

A cheerful corner for the hospital classroom.

As important as the physical qualities and resourcefulness is the need for a high degree of empathy and the ability to understand and participate in interpersonal relationships without becoming emotionally involved. In his day-to-day relations with crippled children, the teacher must be prepared to encounter moments of frustration and discouragement due to problems and conflicts arising from the unique situations in which they may find themselves. Throughout, acceptance of handicapping conditions, even their most unesthetic aspects, is an indispensible attitude for a successful teacher of crippled children.

End of Committee Report

Teachers of Crippled Children Appraise a List of Competencies

The committee report just presented is somewhat idealistic and based on the members' broad experiences. To give a more complete picture of desirable teacher qualifications, the opinions of on-the-job successful teachers of crippled children were sought. The method of obtaining their evaluation of competencies was through the inquiry form which included a list of 103 knowledges and skills devised by the Office of Education study staff, independently of the competency committee but with the assistance of other specialists in the education of crippled children.[1] The 150 participating teachers were asked to rate these as "very important," "important," "less important," or "not important" in their "present position as a teacher of crippled children."

The competencies are listed in table 1, page 15, in rank order of importance as determined by the teacher ratings. They are also grouped according to their average evaluation of importance. The opinions of the 150 superior teachers seem to indicate that this list is a valuable one, for high importance was placed on a large proportion of the items. In the entire list of 103 competencies, 47 were considered to be "very important," and 53 "important." Only three were judged "less important" and no knowledge or ability received an average evaluation of "not important."

Highlights of the Teacher Ratings

Reference to the competencies at the top of the list gives an indication of what these teachers think is most important in working with crippled children. Among those items rated highest were the following:

[1] [2] Ability to create a classroom atmosphere conducive to good mental health

[2] Ability to accept children with crippling conditions without overt negative reaction

[3] Ability to create a curriculum in which each child may engage in activities in keeping with his abilities and handicapping conditions

[4] Ability to recognize and make provision for the individual differences in physical, mental, and social traits of each crippled pupil

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[1] See appendix D, page 106, for excerpts from the inquiry form filled in by teachers of children who are crippled.

[2] Throughout the report of evaluations made by teachers of crippled children, the numbers in brackets refer to the rank order of importance of the competency as shown in the left-hand column of table 1, page 15.

Top priority was also given to the teachers' objectivity and sensitivity, as well as ability to help crippled children with their problems and with their attitudes toward themselves [5, 6, 7, 9, 10]. The competencies ranked at the lower end of the scale are primarily concerned with activities for which other specialized personnel are often responsible. Included are competencies in giving tests [98, 101, 103], administering the program [96], and assisting with recreational activities [99].

Table 1.—Relative importance which 150 teachers of children who are crippled ascribed to each of 103 competencies

Rank order [1] of importance	Competencies	Rank order of proficiency [2]
	COMPETENCIES RATED "VERY IMPORTANT" [3] (1–47)	
	The ability—	
1	to create a classroom atmosphere conducive to good mental health	3
2	to accept children with crippling conditions without overt negative reactions	1
3	to create a curriculum in which each child may engage in activities in keeping with his abilities and handicapping conditions	13
4	to recognize and make provision for the individual differences in physical, mental, and social traits of each cripped pupil	11
5	to remain objective, while retaining sympathy and sensitivity	8
6	to work with crippled children without using pressure	9
7	to help crippled children with their personal attitudes toward their physical handicap	12
8	to cooperate (given the diagnosis and prognosis) with the medical staff and parents in the general plan of treatment for each crippled pupil	10
sd [4] 9	to detect the crippled pupil's worries, and to plan courses of action aimed at alleviating these	32
10	to help crippled children with their limitations and potentialities	17
11	to devise ways of motivating crippled children	26
12	to establish and maintain good working relationships with medical personnel, nurses, therapists, social workers, psychologists, and guidance personnel	7

See footnotes at end of table.

Table 1.—Relative importance which 150 teachers of children who are crippled ascribed to each of 103 competencies—Continued

Rank order [1] of importance	Competencies	Rank order of proficiency [2]
	COMPETENCIES RATED "VERY IMPORTANT" [3] (1–47)—Continued	
	The ability—	
13	to recognize signs of fatigue in individual crippled children, and to provide rest for them	6
14	to provide enriching experiences for crippled pupils in order to compensate for lack of first-hand experiences due to hospitalization or illness	19
15	to help crippled children with their educational problems	5
16	to provide demonstrations and other enriching experiences within the class for crippled children unable to take field trips	35
17	to adjust to interruptions in the child's day for necessary physical therapy, treatment, or rest	2
18	to recognize symptoms indicating physical problems which should be called to the attention of medical personnel	27
19	to help parents understand their child's limitations and potentialities	24
20	to work as a member of a team with other professional workers, such as medical and psychological personnel, in making a case study of a crippled child aimed at planning a program suited to his needs and abilities	15
21	to coordinate the learning process around socially meaningful themes	22
22	to recognize speech disorders requiring special attention	18
	A knowledge or understanding of—	
23	the role of, and contributions provided to crippled children by physical therapists	28
*s 24	the role of, and contributions provided to crippled children by speech correctionists	31
	The ability—	
sd 25	to use teaching techniques with brain-injured children in keeping with our present knowledge of the implications of different types of injury	72
26	to help crippled children with their social problems	44
	A knowledge or understanding of—	
27	physical and behavioristic traits of children with various types of crippling conditions	42
28	the implications of the diagnosis and prognosis of each crippled pupil	36
sd 29	methods and techniques of teaching the normal child	4

See footnotes at end of table.

Table 1.—Relative importance which 150 teachers of children who are crippled ascribed to each of 103 competencies—Continued

Rank order [1] of importance	Competencies	Rank order of proficiency [2]
	COMPETENCIES RATED "VERY IMPORTANT" [3] (1–47)—Continued	
	The ability—	
30	to interpret medical instructions on the amount of physical activity permitted each pupil, and to plan activities in keeping with these	14
31	to teach a multigrade class of crippled children	16
sd 32	to help crippled children with their vocational problems and life goals	77
	A knowledge or understanding of—	
*33	the role of, and contributions provided to crippled children by occupational therapists	47
	The ability—	
*34	to keep and use cumulative individual educational records of crippled children	21
	A knowledge or understanding of—	
sd 35	methods and techniques of teaching the socially and emotionally disturbed child	71
36	the major types of cerebral palsy and their distinctive characteristics and educational implications	46
37	the role of, and contributions provided to, crippled children by orthopedic surgeons and other physicians	51
	The ability—	
38	to help parents understand school placement	25
39	to provide opportunities for a wide range of social experiences for crippled children in order to further their social as well as intellectual development	58
	A knowledge or understanding of—	
40	the role of, and contributions provided to, crippled children by psychologists	38
	The ability—	
41	to improvise by using toys, games, and so on, as educational tools	37
42	to provide experiences for crippled children in health education	23
sd 43	to use accepted special teaching methods and procedures in teaching crippled children with multiple atypical conditions, such as those who are mentally retarded, gifted, or acoustically handicapped	70
44	to operate and use such audiovisual aids as filmstrip projectors, tape recorders, and record players, in teaching crippled children	20

See footnotes at end of table.

Table 1.—Relative importance which 150 teachers of children who are crippled ascribed to each of 103 competencies—Continued

Rank order [1] of importance	Competencies	Rank order of proficiency [2]
	COMPETENCIES RATED "VERY IMPORTANT" [3] (1-47)—Continued	
	A knowledge or understanding of —	
sd *45	the difference between teaching-learning processes of the crippled with orthopedic handicaps and those with neurological handicaps	7
	The ability—	
46	to help parents get factual information from clinics and so on, and to assist them in facing the social and emotional problems arising from having a crippled child in the family	59
47	to carry on speech development with crippled children under the direction of a speech correctionist	53
	COMPETENCIES RATED "IMPORTANT" (48-100)	
	The ability—	
*48	to encourage and create situations in which crippled children may associate naturally and freely with normal children	39
49	to interpret special educational programs and the problems and abilities of crippled children to the general public, regular school personnel, and non-professional school workers such as bus attendants and school custodians	41
50	to make educational interpretations from psychological reports	48
51	to help the child, the classroom teacher, and the parents, in preparing for transfer from one type of school situation to another, such as from hospital class to special day school class or from special class to regular class	30
	A knowledge or understanding of—	
52	the diagnosis, general plan of medical treatment, and physical limitations of various types of crippling conditions	65
	The ability—	
sd 53	to provide experiences for crippled pupils in music	85
	A knowledge or understanding of—	
54	types, sources of procurement, and uses of equipment and materials for teaching crippled children, such as book racks, no-roll crayons, and tape-down paper	54

See footnotes at the end of table.

Table 1.—Relative importance which 150 teachers of children who are crippled ascribed to each of 103 competencies—Continued

Rank order [1] of importance	Competencies	Rank order of proficiency [2]
	COMPETENCIES RATED "IMPORTANT" (48-100)—Continued	
	The ability—	
55	to make educational interpretations from medical reports	60
	A knowledge or understanding of—	
56	the role of, and contributions provided to crippled children by social workers	57
57	reference materials, professional literature, and journals on the care and education of crippled children	40
	The ability—	
58	to assist crippled children in developing a hobby or diversional interests suited to their ability	61
sd 59	to help parents understand occupational placement	95
60	to make educational interpretations from reports of social workers	43
61	to provide experiences for crippled children in the fine arts	49
62	to select and use diverse special equipment developed for use of crippled children, such as special typewriter guides, cut-out tables, no-roll crayons, and tape-down paper	68
63	to develop a curriculum with a rapidly changing group	55
	A knowledge or understanding of—	
64	findings of research studies on the educational and psychological characteristics of crippled children	69
	The ability—	
65	to provide experience for crippled pupils in dramatic arts	56
	A knowledge or understanding of—	
66	types, sources of procurement, and uses of such equipment as relaxation chairs, cut-out tables, and adjustable desks	63
67	findings of research studies on the mental ability of children with various types of crippling conditions	66
*68	names, locations, and services offered by community agencies which sponsor recreational activities, vocational guidance, workshops, and other services for crippled children	64
	The ability—	
sd 69	to work with vocational rehabilitation agencies in helping the crippled child toward an occupational adjustment	88

See footnotes at end of table.

Table 1.—Relative importance which 150 teachers of children who are crippled ascribed to each of 103 competencies—Continued

Rank order [1] of importance	Competencies	Rank order of proficiency [2]
	COMPETENCIES RATED "IMPORTANT" (48-100)—Continued	
	The ability—	
sd 70	to work with normal children in helping them to accept the crippled child	33
	A knowledge or understanding of—	
71	methods and techniques of teaching the mentally retarded child	75
sd 72	names, locations, and functions of community non-school agencies (public and private) serving crippled children and their parents, such as hospitals, orthopedic clinics, health departments, and vocational rehabilitation agencies	45
	The ability—	
73	to provide experiences for crippled pupils in arts and crafts	84
	A knowledge or understanding of—	
sd 74	the various types of crippling conditions, such as poliomyelitis, cerebral palsy, and scoliosis	34
	The ability—	
75	to participate in home-school activities	62
sd *76	to organize and plan for adjustments which must be made in carrying out field trips for crippled children	50
sd 77	to tell stories well	29
	A knowledge or understanding of—	
sd 78	names, locations, and functions of national voluntary agencies concerned with the education and general welfare of the crippled, such as the National Society for Crippled Children and Adults, National Foundation for Infantile Paralysis, and United Cerebral Palsy	52
	The ability—	
79	to carry on speech development with crippled children with the occasional help of a speech correctionist	81
80	to contribute to community leadership in establishing an educational program for crippled children	90
sd 81	to provide experiences for crippled children in the domestic arts	94
	A knowledge or understanding of—	
82	Federal, State, and local laws and regulations affecting the education of crippled children	82

See footnotes at end of table.

Table 1.—Relative importance which 150 teachers of children who are crippled ascribed to each of 103 competencies—Continued

Rank order of importance	Competencies	Rank order of proficiency
	COMPETENCIES RATED "IMPORTANT" (48-100)—Continued	
	The ability—	
83	to work with architects and school administrators in planning and securing classroom and special school equipment and housing facilities for crippled children, such as wide corridors, elevators, and ramps	89
	A knowledge or understanding of—	
ed 84	methods and techniques of teaching the hard of hearing child	98
ed 85	psychological terminology	74
86	Federal, State and local laws and regulations pertaining to the health and general welfare of the crippled	91
	The ability—	
ed 87	to provide experiences for crippled children in the industrial arts	100
88	to administer individual verbal and performance tests of mental ability to crippled children	97
	A knowledge or understanding of—	
*89	types, sources of procurement, and uses of self-help and corrective equipment, such as large feeding spoons, crutches, hand rails, braces, and wheel chairs	78
	The ability—	
90	to take responsibility for, or to assist with, a recreational program for crippled children	83
	A knowledge or understanding of—	
ed 91	methods and techniques of teaching the partially seeing child	99
92	methods and techniques of teaching the gifted child	93
	The ability—	
ed 93	to role-play (substitute for mother or father)	67
94	to play the piano and develop and direct a rhythm band	96
	A knowledge or understanding of—	
ed 95	anatomy and physiology of the human body	80
	The ability—	
96	to administer an educational program for crippled children (selection of personnel, finance, reporting, and so on)	101
	A knowledge or understanding of—	
ed 97	medical and hospital terminology	86
	The ability—	
98	to administer sociometric tests to crippled children	102

See footnotes at end of table.

551579—61——3

Table 1.—Relative importance which 150 teachers of children who are crippled ascribed to each of 103 competencies—Continued

Rank order [1] of importance	Competencies	Rank order of proficiency [2]
	COMPETENCIES RATED "IMPORTANT" (48-100)—Continued	
	The ability—	
sd 99	to take responsibility for or to assist with one or more activities for crippled children, such as Girl or Boy Scouts, hobby clubs, and photographic clubs	92
100	to teach touch typing	103
	COMPETENCIES RATED "LESS IMPORTANT" (101-103)	
	The ability—	
sd 101	to administer standardized group achievement tests to crippled children	76
	A knowledge or understanding of—	
sd 102	the history of education for crippled children	79
	The ability—	
sd 103	to administer group intelligence tests to crippled children	87
	COMPETENCIES RATED "NOT IMPORTANT"—NONE	

[1] The rank order of the items was arrived at by averaging the importance ratings made by the teachers. The rank of each item was determined by its average rating. See page 94 for further explanation of statistical procedure used.

[2] When the inquiry form was sent to teachers, they were requested to rate their own proficiency in each of the items on a scale of "good," "fair," and "not prepared." The rank of each item was determined by its average rating. On the average, teachers rated themselves "good," on items indicated by proficiency rank order numbers 1–58, "fair" on 59–103. No item received an average rating of "not prepared."

[3] Items were classified into the four groups of importance according to their average ratings: "very important," "important," "less important," and "not important." See page 94.

[4] The symbol (*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 52. See page 97 for statistical procedures employed to determine significant difference.

[5] Starred (*) items indicate competencies which showed a statistically significant difference between the average rating of importance given by the 110 classroom teachers and the average rating of importance given by the 40 teachers working in hospitals, sanatoriums, or convalescent homes. See page 98 for statistical procedures employed to determine significant difference between the average rating of these two groups. A discussion of these differences may be found on page 32.

Although the 103 competencies do not all fit into mutually exclusive categories, they have been grouped for discussion purposes around somewhat the same headings used in the committee report: (1) Technical knowledge, (2) fostering the personal adjustment of the child, (3) adjustments in curriculum, methods, and materials, (4) evaluation and reports, (5) cooperation with other personnel, (6) home-school relationships, (7) responsibility for the overall program, (8) multiple deviations, and (9) the teacher as a person.

Technical Knowledge

From the group of technical knowledges included in the inquiry form, only three were rated by the teachers as "very important": a knowledge of the physical and behavioristic traits of children with various types of crippling conditions [27]; a knowledge of the major types of cerebral palsy and their distinctive characteristics and educational implications [36]; and a knowledge of the differences that exist between the teaching-learning processes of children with orthopedic handicaps and those of children with neurological handicaps [45].[3]

Several competencies dealt with knowledge of medical information. All of these received average evaluations of "important", although some were much higher in rank order of importance than others. An understanding of the diagnosis, general plan of medical treatment, and physical limitations of various types of crippling conditions [52] was considered of greater value to the teacher than knowing the causes of these conditions [74]. Even lower in the list was a knowledge of psychological terminology [85], of anatomy and physiology [95], and of medical and hospital terminology [97].

Items concerning professional literature and current research are found toward the middle of the rank order list of competencies in table 1 and they were among those judged by the teachers to be "important". Included are knowledge of reference materials, professional literature, and journals on the care and education of crippled children [57]; knowledge of findings of research studies on the educational and psychological characteristics of crippled children [64]; and knowledge of findings of research studies on the mental ability of children with various types of crippling conditions [67].

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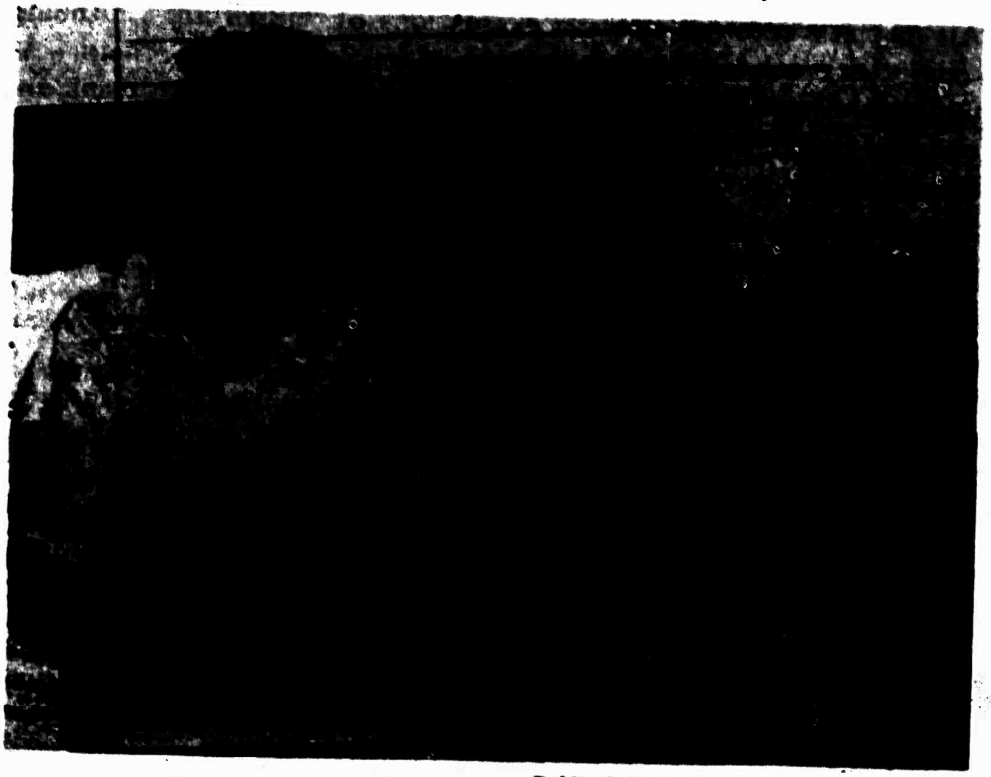
[3] The reader may wish to refer to appendix B, page 89, for information about the participating teachers, such as the types of crippling conditions included in their classes.

Fostering the Personal Adjustment of the Child

Personal adjustment of children who are crippled was a major concern of the teachers. To them, the most important of the 103 competencies was the ability to create a classroom atmosphere conducive to good mental health [1]. Almost equally essential was the ability to work with crippled children without using pressure [6].

Awareness and understanding of psychological problems which may accompany crippling conditions, and the corresponding ability to help a child with these problems, are necessary competencies for teachers. This is evident in the high ratings given the ability to help crippled children with their attitudes toward their physical handicap [7] and the ability to detect a pupil's worries and plan courses of action to alleviate them [9]. Other similar teacher competencies receiving "very important" ratings include helping crippled children with their limitations and potentialities [10], their educational problems [15], their social problems [26], and their vocational problems and life goals [32].

Current educational interest is focused on the adjustment of the handicapped child to the nonhandicapped population. The list of



Public Schools, City of Los Angeles, Calif.

School-to-home telephone lessons supplement the work of the home teacher.

competencies contained two items depicting the teacher's role in fostering this. Both were rated as "important" although encouraging and creating situations in which crippled children might associate naturally and freely with normal children [48] was apparently considered a somewhat greater teacher responsibility than working with normal children in helping them to accept crippled children [70].

Children with some types of crippling conditions must frequently adjust to new educational settings as they transfer, for example, from a hospital class to a special day school or from a special to a regular class. Teachers in this study indicated that it was "important" to be skillful in helping the child, the parents, and the classroom teacher prepare for these changes [51].

Curriculum, Methods, and Materials

As can be seen thus far in the report, the special teachers' major concern revolves around each individual pupil. This is further highlighted in the ratings of competencies dealing with curriculum adjustments and special teaching methods. The unique needs of each crippled child apparently form the bases for curriculum development. Maximum value was given by these superior teachers to competence in creating a curriculum in which each child may engage in activities in keeping with his abilities and handicapping conditions [3] and in providing for individual differences in physical, mental, and social traits of each pupil [4]. This principle of individualization, inherent in the education of all children, takes on new meaning when a child's crippling condition precludes his participating in activities generally considered essential for academic readiness and overall development. Ability to make major curriculum adaptations in such cases was emphasized. High ratings were given to the ability to provide enriching experiences in order to compensate for lack of first-hand experiences due to hospitalization or illness [14] and to provide demonstrations and enriching experiences for children unable to take field trips [16]. Other evidence of teacher concern for possible deprivation in life experiences of crippled children is found in the "very important" ratings given to ability to coordinate the learning process around socially meaningful themes [21] and to provide opportunities for a wide range of social experiences in order to further social as well as intellectual development of crippled children [39].

In developing the curriculum for boys and girls who are crippled, the teacher faces several other unique problems which call for specialized knowledge and skill. Of particular importance is the creative ability to devise ways of motivating crippled children [11]. Although

motivation is a key factor in the education of all children, it plays a vital role in the teaching of children who may have immense difficulty with even the simplest schoolroom task requiring muscle coordination, such as controlling a pencil in writing, or of those who may be lethargic after prolonged illness. Almost equally essential is the teacher's alertness for signs of fatigue in individual children [13] and his ability to make adjustments in the teaching schedule for periods of rest and required therapy or medical treatment [17].

Another condition affecting classroom teaching procedures is the relatively small number of crippled children in any but the very large population centers requiring special class placement or hospital instruction. This makes it necessary for teachers to work with children of wide age and grade range, and with a variety of disabilities. Consequently the participants in this study put high value on such competencies as being able to teach a multigrade class [31] and knowing the difference between the learning processes of those with orthopedic handicaps and those with neurological handicaps [45]. Still another problem faced by teachers of crippled children is frequent change in educational programming necessitated by changes in the physical conditions of the children. Thus an "important" competence is ability to develop a curriculum with a rapidly changing group [63].

Opinions were expressed on the relative value of the teacher's being able to offer various "special subjects" in the curriculum. These abilities were not among those most highly valued. One exception was the "very important" rating given to competence in health education [42]. The somewhat lower evaluations placed on competence in teaching music [53], fine arts [61], dramatic arts [65], arts and crafts [73], domestic arts [81] and industrial arts [87] indicate that many of the teachers probably had little responsibility in these subjects. In some cases, other school or hospital staff provide experiences of this kind for the children. For example, school nurses or physical educators may assist in health education; occupational therapists are specialists in arts and crafts; while specially trained music and art teachers may be available through the local school system.

Competence in helping children develop a hobby or diversional interest suited to their ability [58] was thought to be "important", but many teachers apparently felt that providing recreational experiences [90] and out-of-school activities [99] is the responsibility of other specialists. The fact that the teachers consistently placed high value on the ability to assist crippled children in their social development raises the question: How important is it that teachers be prepared to use their specialized understanding of crippled children to enable these children to participate in out-of-school recreation activ-

ities by, for example, orienting adult group leaders to the children's abilities and limitations?

Ability to use toys, games, and audiovisual aids as educational tools [41, 44] was considered to be "very important", but a knowledge of special equipment and materials for use with crippled children received only moderate emphasis. Included in this latter group were teaching materials such as no-roll crayons and tape-down paper [54], special furniture such as adjustable desks and cut-out tables [62, 66] and self-help or corrective equipment, such as large feeding spoons and hand-rails [89]. These comparatively low ratings raise the question of whether all of the participating teachers had access to a variety of specialized equipment and materials. Further, the results point to the need for study and evaluation of the equipment currently recommended or prescribed for use with children having various crippling conditions.

Evaluation and Reports

A number of items dealt with competence in using various kinds of tests, records, and reports. Teachers placed highest importance on understanding the implications of the diagnosis and prognosis for each child [28] and on being able to interpret medical instructions on the amount of physical activity permitted him [30]. Also considered to be of real importance was the ability to keep and use cumulative individual educational records of crippled children [34]. Ability to make educational interpretations from psychological reports [50], medical reports [55], and reports of social workers [60] ranked at about the middle of the list.

In general, little emphasis was placed on teacher ability to give individual and group intelligence tests [88, 103], sociometric tests [98], or standardized group-achievement tests [101]. In many school systems such services are provided by other specialists. Undoubtedly the teachers also felt that these tests, especially the group tests, were not always adequate for children with physical disabilities.

Cooperation With Other Personnel

Most children with crippling conditions require the direct services of a variety of professional personnel and community agencies. The teacher's responsibility extends beyond the classroom as he works with these other individuals and agencies—a competence considered essential by the participating teachers. To cooperate (given the diagnosis

and prognosis) with the medical staff and parents in the general plan of treatment for each crippled child ranked 8th in the entire list of 103 competencies. The high premium set on cooperation was further substantiated by emphasis on teacher ability to establish and maintain good working relationships with medical personnel, nurses, therapists, social workers, psychologists and guidance personnel [12]. "Very important" also is ability to work as a member of a team with other professional workers in making a case study of a crippled child and planning a program suited to his needs [20]. In contrast, ability to work with vocational rehabilitation agencies in helping crippled children toward occupational adjustment [69] ranked more than halfway down the list. If more of the participating teachers had been working with adolescent children, the rating might have been higher. (See page 91, for the percentage of teachers working with kindergarten, elementary, and secondary pupils.)

Further analysis of the ratings shows that teachers are expected to carry out their role as educational specialists on the team and at the same time be on the alert for problems that should be referred to other specialists, such as medical personnel [18] or speech correctionists [22]. Knowledge of the services rendered by these various coworkers was thought to be "very important". Teachers placed highest value on understanding the function of physical therapists [23], speech correctionists [24], and occupational therapists [33]—the three persons most likely to be in close association with the teacher in a school program. While knowledge of the function of orthopedic surgeons and other physicians [37] and of psychologists [40] ranked rather high, a knowledge of the role of social workers [56] seems to be a little less vital to the work of the teachers. This evaluation might change as social workers become more available to children in school situations.

Knowledge of the location and services of community nonschool agencies [68, 72] was deemed "important", but relatively less so than understanding the work of individual professional persons concerned with the day-to-day problems of each child. Placed even lower on the list of competencies, but still "important", is the teacher's need for information about national voluntary or professional organizations concerned with the education and general welfare of the crippled (such as the Council for Exceptional Children, National Society for Crippled Children and Adults, and United Cerebral Palsy Association) [78].

Another aspect of the specialized teaching role is that of serving as an interpreter of special education programs and of the problems and abilities of crippled children [49]. Children come into frequent

contact with persons who do not have access to information which would help them understand the child's disability and potential. For example, a bus driver might be willing to resist a child's appeal to be carried if he realized that a major objective of the treatment program is for the child to be able to walk independently.

Home-School Relationships

Teachers, through their ratings, tended to define their relationships with the child's family. Among the top-ranking skills in this category are the ability to help parents understand their child's limitations and potentialities [19] and to help them understand school placement [38]. As a child moves from hospital school to home instruction to a special orthopedic class or to a regular grade, the family too must adjust. The teacher's role is one of making interpretation and giving support when it is needed [51]. Also among the "very important" items is teacher ability to help parents obtain factual information from clinics and to assist them with social and emotional problems arising from having a crippled child in the family [46].

Ability to aid parents in understanding occupational placement [59] received slightly less emphasis, although it did fall within the group rated "important". This task is usually shared to a great extent with other staff members, such as psychologists or vocational counselors, and is especially applicable to secondary school teachers who, it will be remembered, made up only about one-quarter of the 150 teachers of crippled children participating in the study. In thinking of teacher role in relation to the child's family, it is particularly interesting to note that the competency ranked lowest in this grouping was ability to participate in home-school activities [75].

Responsibility for the Overall Program

Competence in administration and organization of educational programs for crippled children was "important" to the teachers, but by no means as essential as understanding and working with the children in the classroom. Included among these competencies are ability to contribute to community leadership in establishing an educational program for crippled children [80], ability to work with architects and school administrators in planning and securing classroom and other special school equipment and housing facilities [83], and ability to administer an educational program for crippled children [96]. The extent to which the special teacher participates in these tradi-

tionally administrative activities may depend on the size of the community or the availability of other special education personnel. Nevertheless, these ratings indicate that many special teachers are called upon to contribute their specialized knowledge in the establishment, expansion, and administration of educational programs for crippled children.

Reevaluation of these competencies in the near future might prove interesting. More and more school-treatment centers, especially for those with cerebral palsy, are being established in public schools. Teachers may increasingly be called upon to serve as coordinators and to contribute expert leadership. Recently, too, there has been much emphasis on school construction. Architects and school administrators may increasingly seek the help of special education personnel in the cooperative planning of school facilities.

Three other competencies perhaps more related to the overall program than to classroom teaching were also ranked relatively low in the hierarchy of values. Still within the "important" category is an understanding of Federal, State, and local laws and regulations affecting the education of the crippled [82] and pertaining to the health and general welfare of the crippled [86]. Relegated to the "less important" category, however, is a knowledge of the history of the education of crippled children [102].

Multiple Deviations

Teachers were asked to give opinions on the importance of being able to teach children with deviations other than the crippling condition. Ability to use accepted special teaching methods and procedures in teaching crippled children with multiple atypical conditions [43] was ranked among the "very important" competencies, but these teachers seemed to feel little need to be experts in all areas of special education. This differentiation is seen in the ratings given individual items referring to knowledge or teaching methods in specific areas of exceptionality. For example, high value was given to knowledge of methods and techniques of teaching the socially and emotionally disturbed child [35], a rating which reflects the repeated emphasis of the teachers on mental health and adjustment of crippled children. In contrast, relatively low value was placed on methods and techniques of teaching the mentally retarded [71], the hard of hearing [84], the partially seeing [91], or the gifted [92].

Similar discrimination in defining the teacher role is shown in the descending rank given to three competencies related to work with crippled children with speech impairments: ability to recognize speech disorders requiring special attention [22], ability to carry on speech

development under the direction of a speech correctionist [47], and ability to carry on speech development with only the occasional help of a speech correctionist [79].

These ratings were undoubtedly affected by the teachers' varying frames of reference. It is probable that many of the school systems did not serve children with gross multiple handicaps. In other situations, children may have been grouped so strictly according to the primary disability that the teachers encountered few children for whom such distinct services were needed. As increased emphasis is placed on the multi-disabled and on educational diagnosis, further evaluation of these competencies may offer new insight into the professional needs of teachers.

The Teacher as a Person

Personal qualifications of a teacher are of high importance. The 150 teachers expressed this opinion in two ways: (1) by rating highly the three pertinent competencies in the inquiry form, and (2) by their positive replies to the question, "Are there personal characteristics needed by a teacher of crippled children which are different in degree or kind from those needed by a teacher of so-called normal children?"

Competencies relative to personal characteristics are among the high ranking items in table 1. Ability to accept children with crippling conditions without overt negative reaction ranked second and to remain objective while retaining sympathy and sensitivity ranked fifth. Without considerable personal adaptability, the ability to adjust to interruptions in the child's day for necessary physical therapy, treatment, and rest [17] would be impossible. Need for awareness of the child's feelings and personal adjustment is included in many of the other competencies considered "very important" by the successful teachers in the study.

Do teachers of crippled children need special personal characteristics? About three-fourths of the teachers answered "yes" and wrote at length about the qualities they felt essential. Most responses contained elements of acceptance, dedication, physical and mental health, resourcefulness, and an abundance of patience. Over and over again the teachers mentioned their need to be realistic in working with the children.

Patience in dealing with behavior and achievement problems was mentioned by more than a third of the group. References to the setting of realistic goals and satisfaction with small gains in progress were frequent.

One teacher described her ideal as follows: "A teacher of crippled children must be sympathetic toward each child but not overindulgent nor overprotective. Her task requires her to look forward to the time when each of her pupils will take his place in the community as an independent and self-supporting individual. This goal cannot be attained in every case."

Physical stamina is of particular importance. Teachers were emphatic in their description of the need to be able to help children in and out of wheelchairs, pick up crutches, lock braces, and move classroom equipment.

Comparison of Opinions of Day School and Hospital Teachers

On each of the 108 competencies, a statistical comparison was made of the evaluations of importance given by the 110 teachers working in day schools and the 40 teachers working in hospitals, sanitoriums, or convalescent homes.[4] A statistically significant difference of opinion was found on eight of the competencies. These have been starred (*) in the left-hand column of table 1. In each case, the day school teachers considered the knowledge or ability to be of greater importance than did the hospital teachers.

It may be that day school teachers are more often confronted with providing educational programs for children with a variety of types of crippling conditions, since they rated as more important than hospital teachers a knowledge of the difference in teaching-learning processes of those with orthopedic handicaps and those with neurological handicaps [45]. As might be expected, day school teachers are also more concerned than hospital teachers with the ability to organize and make adjustments necessary for taking crippled children on field trips [76].

Other differences in ratings suggest that day school teachers work more closely than do hospital teachers with speech correctionists [24], occupational therapists [33], and community agencies [68]. On one of the eight items, the difference of opinion was enough to change the category of importance if the ratings of the day school teachers alone were used. Encouraging situations in which crippled children may associate naturally and freely with normal children [48] was rated by the total group as "important", but by the day school teachers as "very important".

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[4] See appendix C for an explanation of the procedure used to determine statistically significant differences.

Effect of Recency of Preparation on Opinions

The plan of the study called for a comparison of the opinions expressed by teachers having had specialized preparation a number of years ago with the opinions of those having more recent training. Of the 110 day school teachers, 50 had received the major part of their professional preparation before January 1, 1946, and 60 since that date. In the entire list of 103 competencies, only 2 items showed a statistically significant difference of opinion between these two groups.[8] Both of these dealt with a knowledge of nonschool community agencies, the first of the type that sponsors recreational activities, vocational guidance, or workshops for crippled children [68], the second of the type that provides health and welfare services to crippled children and their parents [72]. In each case the competency was considered more important by those prepared since 1946.

Public Schools, Chicago, Ill.

A globe at the bed of a hospitalized child illustrates the geography lesson as in a real classroom.

[8] See appendix C for an explanation of the procedures used to determine statistically significant differences.

Committee Report on Competencies Needed To Teach Children With Special Health Problems

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The child with special health problems is the child who needs special consideration in planning for his educational program because he has a chronic condition such as rheumatic fever, diabetes, tuberculosis, nephritis, or epilepsy; or because he is incapacitated by injury or illness for a period of time or at recurring intervals. He may be a so-called "normal" child who is temporarily disabled; he may be a child with a chronic health problem who is able to carry on normal activities except at recurring intervals; he may have a permanent or long-term disability; or he may have a protracted terminal illness.

Whatever his physical condition, he has one educational requirement in common with all other children: a program designed to suit his needs and abilities is both his right and his necessity. Not only does it aid him in keeping up with his peers, but even more important it contributes to the total therapeutic program designed to return him to, or keep him as nearly as possible at, normalcy.

The teacher meets and works with this child in any of several possible situations. He may be in a special room or school for physically handicapped children; he may be receiving his schooling in his own home; he may be in a hospital for a long or a short period of time; he may be in a sanitarium or convalescent home.

The Committee believes there are some specific competencies and personal qualities needed to teach children with special health problems. Perhaps no one teacher can ever be expected to excel in all the abilities or knowledges listed in this report, but they represent a guide against which a teacher may wish to check himself. Hopefully, this study will encourage college staff members responsible for the preparation of future teachers to offer curricula which will foster development of these needed competencies. It may also serve as a resource for supervisors in State and local school systems in planning programs of inservice professional preparation.

Technical Knowledge

Foremost among this group of competencies is a knowledge of the disorder, its treatment, and its implications for an educational program. It is not expected that any teacher will have, in advance, exact knowledge of every condition which he may encounter at some time in working with children with special health problems. It is essential, however, that he know how to obtain this knowledge in relation to each individual child with whom he works, and that he have sufficient general medical background to make practical application of his knowledge.

He must know how to find answers to such questions as the following: Is the condition acute or recurrent? What symptoms may be significant of progress or regression? What restrictions must be placed upon a child in regard to exercise or diet, and why? What psychological problems are caused by the condition or the restrictions it makes necessary? What is the probable prognosis?

The teacher of the homebound child may be required to apply extensive understanding of the nature of his pupil's disability, since frequently he is the only person from outside the home to have continuing contact with the child and must carry a greater share of the responsibility for helping him to know his limitations and potentialities.

Understanding the Child With a Special Health Problem

A knowledge of mental health principles and skill in applying them to help children is essential for the teacher. He needs understanding of the psychological problems which might arise, such as the outcast feeling of the child who must have unsightly and malodorous medications, the feeling of rejection because of seizures, or the overly aggressive behavior which may be used to compensate for restrictions on diet or physical activity. He must be able to recognize and cope with these behavior symptoms, and have skill in offsetting fears, irritability, and discouragement. Required also is teacher skill in helping the child develop a wholesome attitude whereby he can accept the limitations imposed and learn to make adjustments realistically. To do a better job in helping the child, the teacher needs awareness of the impact of the emotional attitude of the child's family. For example, some families appear to feel that their child is a burden, while other families seem to be over-protective.

Knowledge of general child growth and development is, of course, basic to the application of mental health principles. The teacher must

be able to distinguish between what is normal reaction and interest for a child in a given stage of development and what is symptomatic of the disability or a poor adjustment to it.

Curriculum, Teaching Methods, and Materials

A high level of ability in curriculum development and adjustment is required by this teacher. Providing for group instruction or for individual bedside teaching for hospitalized and homebound children, for the rest periods required by some and for the snack periods prescribed for others, calls for a sound understanding of educational goals and a variety of methods and procedures for achieving them.

The temporary character of a large proportion of the hospital population makes it necessary for the teacher in this setting to be able to maintain continuity of program within a constantly changing group. In some cases, program planning must be sufficiently realistic to aim at goals feasible of attainment by the child who throughout his adult life will have to observe limitations necessitated by a chronic condition. The teacher's resourcefulness and ingenuity will be called upon as he devises a sound educational program for the occasional child who must accept and adhere to a regime of complete bed rest.

Skill in motivation is needed to work with many of these children who, because of the traumatic or long-term nature of their difficulties, are frequently withdrawn or apathetic. A burned child, for instance, is often listless, fearful, and lacks interest in anything but his own fear and pain. The teacher must be constantly searching for, and providing, opportunities to extend his interest and must be able to provide the hospitalized or the homebound child with vicarious experiences to substitute for the stimuli he would receive in the usual school environment.

Skill in selection and use of educational materials is needed by this teacher because of the wide variety of disabilities and limitations among the children with whom he works. He may, for instance, have to find and adapt materials for use by a child on a frame, by a child who is bandaged from his finger tips to his shoulders, or by a child for whom physical exertion of any sort is prohibited over a period of weeks. Accordingly, there is constant demand upon his resourcefulness and imagination in creating new devices or new methods of utilizing familiar ones.

Using Records and Reports

An ability to keep and use records and to work with others in utilizing them to best advantage is essential. With this competency, a teacher can facilitate proper adjustment of the school program as the child transfers, for medical reasons, from one setting to another. To illustrate: a child going from hospital to home instruction can be helped to make better adjustments, both educationally and personally, if the teacher in the hospital has kept essential records and passes them on to the home teacher. In reporting, the teacher should be able to include information about the child's attitudes, interests, weaknesses and strengths, as well as reports of academic achievement.

Cooperation With Other Personnel

The teacher in either an educational or medical setting must possess to a high degree the ability to work as part of a team. For this he needs not only knowledge of, but respect for, the work and points of view of persons in other professions, such as physicians, social workers, and nurses. He must be able to adjust to routines and procedures not directly related to the school setting, and to make changes in the teaching program as indicated by changes in the child's physical condition.

Knowledge of community resources and how to utilize them is a particular and continuing requirement for the teacher of children with special health problems. Many of the children with whom he works may need clinical, recreational, and vocational services over a prolonged period, possibly throughout their school years and into adult life. For the teacher, this suggests not only a background of general information but exact knowledge of such things as standards of eligibility for services, referral procedures, and how and when to request reevaluation.

Home-School Relationships

The teacher of the homebound child must possess the highest degree of skill in relationships with families and an understanding of the role played by each member. His association with the family is closer and more frequent than is usual for teachers, and this contact takes place in the home setting. Basic to his success therefore, is the ability to adapt to living standards and cultural patterns which may be different from his own. It is in this setting that his ability to help parents understand and accept the child's disability will be invaluable.

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Personal Qualities

Some unusual qualities are required in the teacher of children with special health problems because of the variety of settings in which he may work, because of the number of physical deviations falling under this broad classification, and because of the intense emotional impact caused by some of the conditions.

Superior emotional adjustment is a primary essential if the teacher is to achieve both success and satisfaction in this field of work. It is necessary to be able to maintain proper equilibrium between an overly sympathetic reaction and a lack of understanding of very real emotional problems when dealing with a child who may be in actual pain, confronting a life of semi-invalidism, enduring long separation from his home and family, or suffering from a terminal illness. Although the teacher must have sensitivity to, and warm sympathy for, the difficulties encountered, he must also be emotionally mature to withstand them and to concentrate on the positive contribution he can make to the child and his parents.

Ingenuity of a high degree is required of this teacher. He must be prepared to provide as many normal experiences as possible for a child in an abnormally isolated or sheltered setting, for a child with restrictions imposed upon his physical activity, or for a child who can tolerate only limited stimulation.

Essential, too, is a warm and outgoing nature to help this teacher in his work. In a hospital or sanitorium the teacher needs skill to serve as a substitute for a child's family. Whatever the setting, he must be able quickly to establish good rapport with children, with their parents, and with persons representing a wide variety of professional disciplines.

Some personality characteristics can never be developed through college courses. Candidates for teaching in this field should therefore be carefully screened for special personal qualities which they must possess to a high degree. Important among these are emotional stability, resourcefulness, and a warm and generous nature.

End of Committee Report

Teachers of Children With Special Health Problems Appraise a List of Competencies

To supplement the committee report, the same method was used as in the study of competencies needed by teachers of crippled children. The inquiry forms[4] filled in by successful teachers of children with special health problems contained a list of 85 knowledges and abilities specific to this area of exceptionality. This list had been developed by the study staff with the assistance of specialists in this area of exceptionality, but independently of the staff working on the committee report. Each item was to be rated as "very important," "important," "less important," or "not important" in the "present position" of the teachers. The competencies are listed in table 2 in rank order of importance. The opinions of these 85 teachers seem to indicate that this is a valuable list, for they considered nearly all the competencies to be "very important" or "important." Only six received average evaluations of "less important" and none was rated as "not important."

A study of table 2 (see page 45) reveals that most of the 26 knowledges and skills rated "very important" and the 53 rated "important" are also included among those described by the committee as necessary for effective teaching of children with special health problems. Further study of the 85 competencies in table 2 shows that they are strikingly similar to the 103 items rated by teachers of crippled children (table 1), with this important difference: In each case, the knowledge or skill is *specifically* related to the special area. Most of the comparable competencies received similar evaluations of importance by the two groups of teachers. The analysis of competencies needed by teachers of children with special health problems will focus on the similarities and point out some of the differences between the two areas. For purposes of comparison, the discussion will center around the same categories used to group competencies needed by teachers of crippled children on pages 23 to 31. These categories are also similar to those used by both competency committees.

Highlights of the Teacher Ratings

The competencies ranked at the very top of the list indicate that the teachers of children with special health problems placed a good

[4] See appendix D, page 106, for excerpts from the inquiry forms filled in by teachers of children with special health problems.

deal of emphasis, as did the teachers of crippled children, on the mental and physical well being of the pupils in their care. Included among the top 10 items were the following:

[1][7] ability to create a teaching atmosphere free from pressures and conducive to good mental health

[2] ability to recognize signs of fatigue

[3] knowledge or understanding of the social and emotional problems which may arise from epilepsy, prolonged illness or cardiac limitation

[4] ability to detect the child's worries and emotional problems and to plan courses of action aimed at alleviating these

[5] knowledge or understanding of methods and techniques of teaching the socially and emotionally disturbed child

[6] ability to cooperate (given the diagnosis and prognosis) with medical staff and parents in the general plan of treatment and care of pupils who have special health problems.

Top priority was also given to the ability to help children with their attitudes toward their physical handicaps [8] and to a combination of teacher objectivity and sensitivity [10].

Low on the scale of importance were a group of competencies for which, as in the area of the crippled, other school personnel are often responsible. Included here were abilities in testing [78, 79, 82], in administering the program [84], and in recreational activities [85].

In general, teachers of children with special health problems also placed about the same value on each of the *groups* of competencies as did teachers of crippled children. However, within each group there were some differences which should be pointed out.[8] In the following discussion, the number in brackets refers in each case to the rank order of importance of the competency as evaluated by teachers of children with special health problems (table 2, page 45). The reader may also wish to refer to table 1 and to the discussion of competencies as evaluated by teachers of crippled children on pages 15 to 31.

The only *technical* knowledge to receive an evaluation of "very important" by teachers of children with special health problems was an understanding of social and emotional problems which may arise from epilepsy, prolonged illness, or cardiac limitation [3]. It will be remembered that teachers of crippled children similarly picked the

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[7] Throughout the report of evaluations made by teachers of children with special health problems, the numbers in brackets refer to the rank order of importance of the competencies a shown in the left-hand column of table 2.

[8] In comparing competency ratings of the two groups of teachers, the reader is cautioned not to place too much weight on rank order of importance. For example, item 88 in the area of crippled received an almost *identical* average rating of importance as did item 24 in the area of special health problems. Too, there were 103 items in the list rated by teachers of crippled children in comparison with only 85 in the list rated by teachers of children with special health problems.

item dealing with physical and behavioral traits related to various types of crippling conditions as one of the few "very important" technical knowledges in their area. Although included among the "important" competencies by both groups, a little less emphasis was placed on knowledge of medical information about specific illnesses in the area of special health problems [45, 54, 64, 67, and 77]. At this point, the reader may wish to refer again to appendix B, page 92, for a resume of the types of health problems included among the pupils taught by the participating teachers. This may well have influenced their ratings, since they were asked to think in terms of their *present* position when making evaluations. Items concerning an understanding of professional literature and research are found at about the middle of both lists of competencies [SH 47, 53].

Ability to foster the *personal adjustment* of children with special health problems was highlighted by teachers in this area. Their ratings coincided with those of teachers of crippled children in that ability to create a classroom atmosphere conducive to good mental health ranked as the number 1 competency in both lists. Also near the top of each rank order list was skill in detecting a child's worries and planning courses of action to overcome them [4]. Closely related is the highly valued ability to counsel children about their attitudes toward the physical handicap [8], their educational problems [16], their limitations and potentialities [18], and their social problems [21]. Ability to help children with vocational problems and life goals [28] was in the "important" category in the area of special health problems, but in the "very important" category in the area of the crippled. In contrast, teachers of children with special health problems gave a "very important" rating to ability to help children, teachers, and parents when the child transfers from one school situation to another [22], while teachers of crippled children rated this competence as "important."

In developing the *curriculum* and using *specialized teaching methods* and *materials*, teacher focus is again on the individual child with special health problems. Ability to appraise mental, social, emotional, and educational development of pupils was considered basic to program planning [11]. Special emphasis was also placed on teacher ability to provide demonstrations and enriching materials which will compensate for lack of first-hand experiences due to hospitalization or to prolonged illness [7]. Among the other unique skills needed because of the health problems of the pupils, is an awareness of fatigue in an individual child [2] and ability to adjust the program to interruptions necessary for medical treatment, observation or rest [19]. Devising ways to motivate children who may have become apathetic

[9] is still another highly important skill. These and most of the other competencies having to do with curriculum or teaching methods were valued about the same by both the teachers of crippled children and teachers of children with special health problems. However, it seemed to be more important to those working with crippled children to be able to teach a multigrade class and to provide experiences in the curriculum for such subject matter fields as music, dramatic arts, and domestic arts [SH 40, 56, 57, 61, 68].

Ability to use *records and reports* was considered by both groups of teachers as far more important than ability to give various kinds of *tests*. Rated as "important" in teaching children with special health problems is ability to develop and use cumulative educational records [29] and to make educational interpretations from psychological [31] and medical [32] reports and from case studies [41]. At the very end of the rank order list are abilities to administer tests of mental ability [70, 82], sociometric tests [79] and group achievement tests [78].

Ability to *cooperate effectively with other professional personnel* apparently has great significance in the work of these teachers. Highest evaluations of importance were given to skill in cooperating with medical personnel in the general plan of treatment and care of individual pupils [6] and in recognizing symptoms which should be referred to them [13]. Serving as a member of a team with other professional persons [25] was considered "very important." However, compared with those working with crippled children, teachers of children with special health problems placed less emphasis on an understanding of the role of such personnel as medical specialists [52], medical social workers [55], and occupational therapists [58].

Helping *parents* to understand their child's potentialities and limitations [17] and his school placement [24] were among the competencies rated "very important" by both groups of teachers. An additional item, rated only by teachers of children with special health problems, was the ability to have a sympathetic but realistic appreciation of the parents' fears about their child's condition [26]. This, too, was evaluated as "very important." Closely related, but further down the rank order list, was ability to help parents get factual information from clinics and agencies so that they may better face the social and emotional problems which may arise from the health problems of their child [42].

Responsibility for the *overall program* of education for children with special health problems in the community was apparently not a vital part of most of the teachers' jobs. They rated even lower than did teachers of crippled children ability to administer [84] or to contribute to community leadership in establishing [66] a special educa-

tion program for the children. They did think it important, however, to know the various types of school programs and the strengths and weaknesses of each [37].

Several competency items in the list concerned ability to teach children with *multiple atypical conditions* or physical and mental deviations other than the special health problem. As in the area of the crippled, using accepted special teaching methods with children who have multiple atypical conditions [39] was rated a good deal higher than a knowledge of teaching methods used with *specific* conditions, such as mental retardation [50], giftedness [62], partial vision [72] or hearing impairment [73]. One striking exception to this pattern is the extremely high value placed on a knowledge of methods and techniques used to teach children who are socially or emotionally disturbed [5]. (Teachers of crippled children had also rated this knowledge as "very important.")

The importance of certain *personal qualities* to the teacher's success with children who have special health problems was emphasized by the participating teachers in two ways. First, they placed high value on those abilities which require such traits as alertness and sensitivity to children's needs [2, 4], sympathy coupled with objectivity [10], and flexibility [19]. Second, 80 percent replied "yes" to the question, "Are there personal characteristics needed by teachers of children who have special health problems which are different in *degree* or *kind* from those needed by teachers of so-called normal children?" Like teachers of crippled children, a large majority not only said "yes" but took time to list these special characteristics. Most stressed the need for exceptional amounts of patience and understanding of children with special health problems. Many teachers also included good physical health and vitality, adaptability, resourcefulness, and flexibility in their lists of needed personal characteristics.

Comparison of Opinions of Those Teaching in Day School, Hospital, or Home Instruction Programs

A statistical comparison was made between the evaluations of importance placed on each of the 85 competencies by teachers of children with special health problems working in the three types of settings: Day schools, hospitals or convalescent homes, and the children's own homes.[9] Differences were found on 12 items. These have been starred (*) in the left-hand column of table 2.

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[9] See appendix C, page 98, for statistical procedures employed.

Understanding the methods and techniques of teaching the child with *crippling conditions* (*including cerebral palsy*) [34] was rated as "very important" by home instruction teachers and much higher than by either day school or hospital teachers. Knowing the causes, symptoms, diagnosis, and general plan of medical treatment of cardiac conditions [45] and of epilepsy [67] was valued significantly higher by home instruction teachers than by teachers in hospitals. Ratings of day school teachers fell between these two extremes and were not significantly different from either home or hospital teachers. Differences on these three competencies undoubtedly reflect the types of health problems of the children being taught by the participating teachers. But the differences also point to a need for further clarification of the categories "crippled" and "special health problems" especially in relation to the setting in which the teacher may be working.

Both day school teachers and home instruction teachers considered it "very important" to be able to create situations in which children have opportunity to associate naturally and freely with so-called normal children [35]. In table 2, this item appears in the "important" grouping because the evaluations of the hospital teachers were so low that they affected the average of the total group. This same difference was found in the ratings by day school and hospital teachers of crippled children (page 32).

Day school teachers considered it more important that did hospital teachers to know community agencies and their services for children with health problems [30]. Similarly, home instruction teachers considered it more important than did hospital teachers to know how to help parents get factual information from community agencies or clinics [42]. As in the area of the crippled, ability to make necessary adjustments so that children may be taken on field trips is another competency more highly valued by day school teachers than by teachers in hospitals or sanatoriums [74].[10]

[10] For the five additional competencies starred in table 2, statistical analysis showed the following significant differences in evaluations of importance: Item 47, home teachers higher than day school teachers; item 58, hospital teachers higher than day school teachers; item 72, home teachers higher than hospital teachers; item 79, day school teachers higher than home teachers; and item 80, hospital teachers higher than either home or day school teachers.

Table 2.—Relative importance which 85 teachers of children with special health problems ascribed to each of 85 competencies

Rank order [1] of importance	Competencies	Rank order of proficiency [2]
	COMPETENCIES RATED "VERY IMPORTANT" [3] (1-26)	
1	The ability—	
	to create a teaching atmosphere free from pressures and conducive to good mental health	4
2	to recognize signs of fatigue	1
sd [4] 3	A knowledge or understanding of—	
	the social and emotional problems which may arise from epilepsy, prolonged illness or cardiac limitation	31
	The ability—	
sd 4	to detect the child's worries and emotional problems and to plan courses of action aimed at alleviating these	19
	A knowledge or understanding of—	
sd 5	methods and techniques of teaching the socially and emotionally disturbed child	32
	The ability—	
6	to cooperate (given the diagnosis and prognosis) with medical staff and parents in the general plan of treatment and care of pupils who have special health problems	5
sd 7	to [illegible]ring demonstrations and enriching materials to [illegible] children in order to compensate for lack of first-[illegible]d experiences due to hospitalization or illness	21
8	to counsel children with special health problems as to their personal attitudes toward their physical handicaps	8
sd 9	to devise ways of motivating pupils who may have become apathetic	37
10	to remain objective while retaining sympathy and sensitivity	11
	The ability—	
11	to appraise the levels of mental, social, emotional and educational development of pupils where there is a relatively frequent change in enrollment, so that an integrated continuing educational program can be developed for each pupil	13
	A knowledge or understanding of—	
12	methods and techniques of teaching the normal child	3
	The ability—	
13	to recognize symptoms of physical problems which should be referred to medical personnel	24

See footnotes at end of table.

Table 2.—Relative importance which 85 teachers of children with special health problems ascribed to each of 85 competencies—Con.

Rank order [1] of importance	Competencies	Rank order of proficiency [2]
	COMPETENCIES RATED "VERY IMPORTANT" [3] (1-26)—Continued	
	The ability—	
14	to develop activities for each pupil based on the medical instructions relative to the amount of physical activity permitted him	6
15	to provide for pupils with special health problems opportunities in the curriculum for experiences in health education (healthful living, personal hygiene, and so on)	7
16	to counsel children with special health problems as to their educational problems	9
17	to help parents understand the child's limitations and potentialities	22
18	to counsel children with special health problems as to their limitations and potentialities	27
19	to adjust to interruptions in the child's day for necessary medical treatment, observation and rest	2
20	to work with pupils in bringing practical, child-selected activities into the curriculum	28
21	to counsel children with special health problems as to their social problems	38
22	to help the child, the classroom teacher, and the parents in preparing for transfer from one type of school situation to another, such as from the hospital class to special day-school class, or from a special class to a regular class	10
23	to work with parents or personnel in the institution in maintaining good health habits of pupils, especially with respect to rest and nutrition	23
24	to help parents understand school placement	25
25	to work as a member of a team with other professional workers, such as medical and psychological personnel, in planning a program suited to each pupil's needs	14
26	to have a sympathetic but realistic appreciation of the parents' fear relative to their child's condition	12
	COMPETENCIES RATED "IMPORTANT" (27-79)	
	The ability—	
27	to use story-telling in the development of reading readiness and as a means of bringing vicarious experiences to pupils	35

See footnotes at end of table.

Table 2.—Relative importance which 85 teachers of children with special health problems ascribed to each of 85 competencies—Con.

Rank order [1] of importance	Competencies	Rank order of proficiency [2]
	COMPETENCIES RATED "IMPORTANT" (27-79)—Continued	
	The ability—	
sd 28	to counsel children with special health problems regarding their vocational problems and life goals	52
29	to develop and make use of cumulative individual educational records of pupils with special health problems	16
	A knowledge or understanding of—	
[3] *30	names, locations, and functions of nonschool community agencies (public and private) having services for children with special health problems, such as health departments, rehabilitation agencies, clinics, hospitals and specialized voluntary agencies	29
	The ability—	
31	to draw educational interpretations from psychological reports	26
32	to draw educational interpretations from medical re-	36
33	of to foster social development of pupils through use ports games and other diversional activities	17
	A knowledge or understanding of—	
*34	methods and techniques of teaching the crippled child (including cerebral-palsied)	44
	The ability—	
*35	to encourage and create situations, where appropriate, in which children have opportunity to associate naturally and freely with normal children	18
	A knowledge or understanding of—	
36	the role of, and contributions provided to children with special health problems by psychologists	46
sd 37	various types of education programs that may be provided for children with special health problems, and their strengths and weaknesses	62
	The ability—	
38	to operate and use audiovisual aids such as a filmstrip projector, tape recorder, and record player	33
sd 39	to use accepted special teaching methods and procedures in teaching children with special health problems who have additional atypical conditions such as mental retardation, giftedness or hearing loss	58
40	to teach a multigrade group of pupils with special health problems at the elementary level only	15
sd 41	to draw educational interpretations from case studies	20

See footnotes at end of table.

Table 2.—Relative importance which 85 teachers of children with special health problems ascribed to each of 85 competencies—Con.

Rank order [1] of importance	Competencies	Rank order of proficiency [2]
	COMPETENCIES RATED "IMPORTANT" (27-79)—Continued	
	The ability—	
*42	to help parents get factual information from clinics and agencies, so that they can better face the social and emotional problems which may arise from having a child with special health problems in the family	45
	A knowledge or understanding of—	
43	types, sources of procurement, and uses of special equipment and materials for teaching children with special health problems	55
	The ability—	
44	to provide for pupils with special health problems opportunities in the curriculum for experiences in arts and crafts	47
	A knowledge or understanding of—	
*45	the causes, symptoms, diagnosis, and general plan of medical treatment of cardiac conditions resulting from rheumatic fever and other causes	34
	The ability—	
46	to provide for pupils with special health problems opportunities in the curriculum for experiences in fine arts	48
	A knowledge or understanding of—	
*47	reference materials, professional literature, and journals on the education and care of children with special health problems	39
	The ability—	
sd 48	to help parents understand occupational placement	66
	A knowledge or understanding of—	
49	types of toys, games, and recreation equipment suitable for use with these pupils	51
sd 50	methods and techniques of teaching the mentally retarded child	69
	The ability—	
51	to work with vocational rehabilitation agencies in helping the child toward an occupational adjustment	56
	A knowledge or understanding of—	
52	the role of and contributions provided to children with special health problems by medical specialists, such as the orthopedist, cardiologist, and pediatrician	49
53	findings of research studies on the education, psychology, and care of children with such special health problems as epilepsy, chronic illness, tuberculosis, and cardiac conditions	75

See footnotes at end of table.

Table 2.—Relative importance which 85 teachers of children with special health problems ascribed to each of 85 competencies—Con.

Rank order [1] of importance	Competencies	Rank order of proficiency [2]
	COMPETENCIES RATED "IMPORTANT" (27-79)—Continued	
	The ability—	
54	the causes, symptoms, diagnosis, and general plan of medical treatment of tuberculosis	53
55	the role of, and contributions provided to children with special health problems by medical social workers	61
	The ability—	
56	to provide for pupils with special health problems opportunities in the curriculum for experiences in music	70
57	to provide for pupils with special health problems opportunities in the curriculum for dramatic arts	50
	A knowledge or understanding of—	
*58	the role of, and contributions provided to children with special health problems by occupational therapists	65
59	Federal, State, and local laws and regulations affecting the education of physically handicapped children, including special health cases	57
60	names, locations, and functions of national agencies concerned with the education or general welfare of children with special health problems, such as the National Tuberculosis Association, American Heart Association, National Epilepsy League, and International Council for Exceptional Children	41
	The ability—	
61	to teach a multigrade group of pupils with special health problems through both elementary and secondary levels	60
	A knowledge or understanding of—	
62	methods and techniques of teaching the gifted child	71
sd 63	psychological terminology	40
64	the causes, symptoms, diagnosis, and general plan of medical treatment of other special health problems, including nephritis, arthritis, and asthma	64
sd 65	anatomy and physiology of the human body	43
	The ability—	
66	to contribute to community leadership in establishing an educational program for children with special health problems	67
	A knowledge or understanding of—	
*67	the causes, symptoms, diagnosis, and general plan of medical treatment of epilepsy	63

See footnotes at end of table.

Table 2.—Relative importance which 85 teachers of children with special health problems ascribed to each of 85 competencies—Con.

Rank order [1] of importance	Competencies	Rank order of proficiency [1]
	COMPETENCIES RATED "IMPORTANT" (27-79)—Continued	
	The ability—	
68	to provide for pupils with special health problems opportunities in the curriculum for experiences in domestic arts	76
	A knowledge or understanding of—	
69	the role of, and contributions provided to children with special health problems by recreation leaders	68
	The ability—	
70	to administer to these children individual verbal and performance tests of mental ability	72
71	to take responsibility for or assist with recreation program for children with special health problems	59
	A knowledge or understanding of—	
sd *72	methods of techniques of teaching the partially seeing child	83
sd 73	the hard of hearing child	82
	The ability—	
*74	to organize and plan for adjustments which must be made in carrying out field trips for pupils with special health problems, (i.e., cardiac, epilepsy, post-tuberculosis, diabetes)	54
sd 75	to provide for pupils with special health problems opportunities in the curriculum for experiences in industrial arts	85
	A knowledge or understanding of—	
76	medical terminology	77
77	the causes, symptoms, diagnosis, and general plan of medical treatment of diabetes	78
	The ability—	
sd 78	to administer to these children standardized group achievement tests	30
*79	to administer to these children sociometric tests	81
	COMPETENCIES RATED "LESS IMPORTANT" (80-85)	
	A knowledge or understanding of—	
sd *80	hospital terminology	73

See footnotes at end of table.

Table 2.—Relative importance which 85 teachers of children with special health problems ascribed to each of 85 competencies—Con.

Rank order [1] of importance	Competencies	Rank order of proficiency [2]
	COMPETENCIES RATED "LESS IMPORTANT" (80-85)—Continued	
	The ability—	
81	to work with architects and hospital, convalescent home, or school administrators in planning and securing classroom space and other housing facilities for the school program	80
sd 82	to administer to these children group intelligence tests	42
	A knowledge or understanding of—	
sd 83	history of education for children with special health problems	74
	The ability—	
84	to administer an educational program for these children (selection of personnel, finance, reporting, and so on)	84
sd 85	to take responsibility for or assist with one or more activities, such as Girl or Boy Scouts, photographic clubs, and so on	71
	COMPETENCIES RATED "NOT IMPORTANT"—NONE	

[1] The rank order of the items was arrived at by averaging the importance ratings made by the teachers. The rank of each item was determined by its average rating. See page 94 for further explanation of statistical procedure used.

[2] When the inquiry form was sent to teachers, they were requested to rate their own proficiency in each of the items on a scale of "good," "fair," and "not prepared." The rank of each item was determined by its average rating. On the average, teachers rated themselves "good" on items indicated by proficiency rank order numbers 1–26, "fair," on 27–85. No items received an average rating of "not prepared."

[3] Items were classified into the four groups of importance according to their average ratings: "very important," "important," "less important," and "not important." See page 94.

[4] The (*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 52. See page 97 for statistical procedures employed to determine significant difference.

[5] Starred (*) items indicate a statistically significant difference in the average rating of importance of any two of the following groups of participating teachers: the 26 working in day schools, the 33 working in home instruction programs, and the 26 working in hospitals, sanatoriums, or convalescent homes. A discussion of these differences may be found on page 43.

Opinions on Teacher Proficiency

SPECIFIC QUALIFICATIONS for teachers of crippled children and for teachers of children with special health problems have been outlined in the committee reports and in the teachers' evaluation of competencies. Some opinions on the ability of teachers to meet these requirements are also available from the study: The teachers rated their own proficiency in each of the knowledges and skills they evaluated for relative importance; the directors and supervisors in State and local school systems expressed opinions on the preparedness of recently graduated teachers of children with crippling conditions or special health problems.

Teachers' Self-Rating

The rank order of teacher proficiency in each of the competencies according to the average self-evaluation of the teachers may be found in the right-hand column of table 1, page 15 (crippled) and table 2, page 45 (special health problems). The rating scale used was "good," "fair," and "not prepared." Teachers of crippled children considered themselves "good" on 58 of the 103 items in their competency list, "fair" on 45. Teachers of children with special health problems considered themselves "good" on 26 of the 85 items in their competency list, "fair" on 59. No knowledge or ability received an average rating of "not prepared" by either of these two groups of teachers. In considering the self-evaluations made by these teachers, it should be recalled that they were selected by their supervisors as superior.

Of particular significance to special educators concerned with preservice or in-service teacher preparation are competencies on which there were differences between teachers' ratings of importance and proficiency. Three aspects of this question will be considered in this

section: (1) Did *individual* teachers tend to value more highly those competencies in which they felt more proficient? (2) Were there any competencies in which the teachers *as a group* felt they lacked proficiency in relation to the importance of the knowledge or ability? (3) Were there any competencies in which the teachers *as a group* felt overly proficient in relation to the importance of the knowledge or ability?

Statistical analysis was made of the differences between the importance and proficiency ratings of each teacher on a sample of ten competencies.[1] The results indicated that there was only a moderate tendency for *individual* teachers in the study to value more highly the competencies which they themselves possessed. The relationship between individual importance-proficiency ratings was not strong enough to suggest that the teachers were not discriminating in their evaluations. There were a number of knowledges and skills in which the teachers, *as a group*, placed statistically significant different *average* evaluations of importance and self-proficiency.[2] These may be identified by the symbol *sd* in the rank order of importance column of table 1, page 15 (crippled) and table 2, page 45 (special health problems).

Importance Rated Higher Than Proficiency

Through their ratings, the teachers have indicated some aspects of their work in which they apparently need additional training or consultant help. If this is true for the teachers selected to participate in this study on the basis of their superior ability, it may be even more so for other teachers of these exceptional children. There were 13 competencies in teaching crippled children and 13 competencies in teaching children with special health problems which received significantly higher evaluations of importance than self-proficiency. A list of these knowledges and skills may be found in table 3. It is perhaps noteworthy that 8 of the 13 items in the area of the crippled are also among the 13 items in the area of special health problems.

Both groups of teachers seem to be somewhat less able to detect an individual child's worries and help alleviate them [CR 9, SH 4][3]

[1] See appendix C, page 96, for statistical procedures used and a summary of the results.
[2] See appendix C, page 97, for procedures employed to determine statistical significance.
[3] In each case, the number in brackets refers to the rank order of importance in tables 3 and 4 and are used for identification purposes only. The symbol CR denotes teachers of crippled children and SH, teachers of children with special health problems.

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Table 3.—Competencies in which ratings of importance were significantly higher than self-ratings of proficiency (from tables 1 and 2)

Rank order of importance [1]	TEACHERS OF CHILDREN WHO ARE CRIPPLED	Rank order of proficiency [1]
	COMPETENCIES RATED "VERY IMPORTANT"	
9	The ability to detect the crippled pupil's worries, and to plan courses of action aimed at alleviating these	32
25	The ability to use teaching techniques with brain-injured children in keeping with our present knowledge of the implications of different types of injury	72
32	The ability to help crippled children with their vocational problems and life goals	77
35	A knowledge or understanding of methods and techniques of teaching the socially and emotionally disturbed child	71
43	The ability to use accepted special teaching methods and procedures in teaching crippled children with multiple atypical conditions, such as those who are mentally retarded, gifted, or acoustically handicapped	70
45	A knowledge or understanding of the difference between teaching-learning processes of the crippled with orthopedic handicaps and those with neurological handicaps	73
	COMPETENCIES RATED "IMPORTANT"	
53	The ability to provide experiences for crippled pupils in music	85
59	The ability to help parents understand occupational placement	95
69	The ability to work with vocational rehabilitation agencies in helping the crippled child toward an occupational adjustment	88
81	The ability to provide experiences for crippled children in the domestic arts	94
84	A knowledge or understanding of methods and techniques of teaching the hard of hearing child	98
87	The ability to provide experiences for crippled children in the industrial arts	100
91	A knowledge or understanding of methods and techniques of teaching the partially seeing child	99

See footnote at end of table.

Table 3.—Competencies in which ratings of importance were significantly higher than self-ratings of proficiency (from tables 1 and 2)—Continued

Rank order of importance [1]	TEACHERS OF CHILDREN WITH SPECIAL HEALTH PROBLEMS	Rank order of proficiency [1]
	COMPETENCIES RATED "VERY IMPORTANT"	
3	A knowledge or understanding of the social and emotional problems which may arise from epilepsy, prolonged illness or cardiac limitation	31
4	The ability to detect the child's worries and emotional problems and to plan courses of action aimed at alleviating these	19
5	A knowledge or understanding of methods and techniques of teaching the socially and emotionally disturbed child	32
7	The ability to bring demonstrations and enriching materials to these children in order to compensate for lack of first-hand experiences due to hospitalization or illness	21
9	The ability to devise ways of motivating pupils who may have become apathetic	37
	COMPETENCIES RATED "IMPORTANT"	
28	The ability to counsel children with special health problems as to their vocational problems and life goals	52
37	A knowledge or understanding of various types of education programs that may be provided for children with special health problems, and their strengths and weaknesses	62
39	The ability to use accepted special teaching methods and procedures in teaching children with special health problems who have additional atypical conditions such as mental retardation, giftedness, or hearing loss	58
48	The ability to help parents understand occupational placement	66
50	A knowledge or understanding of methods and techniques of teaching the mentally retarded child	69
72	A knowledge or understanding of methods and techniques of teaching the partially seeing child	83

See footnote on next page.

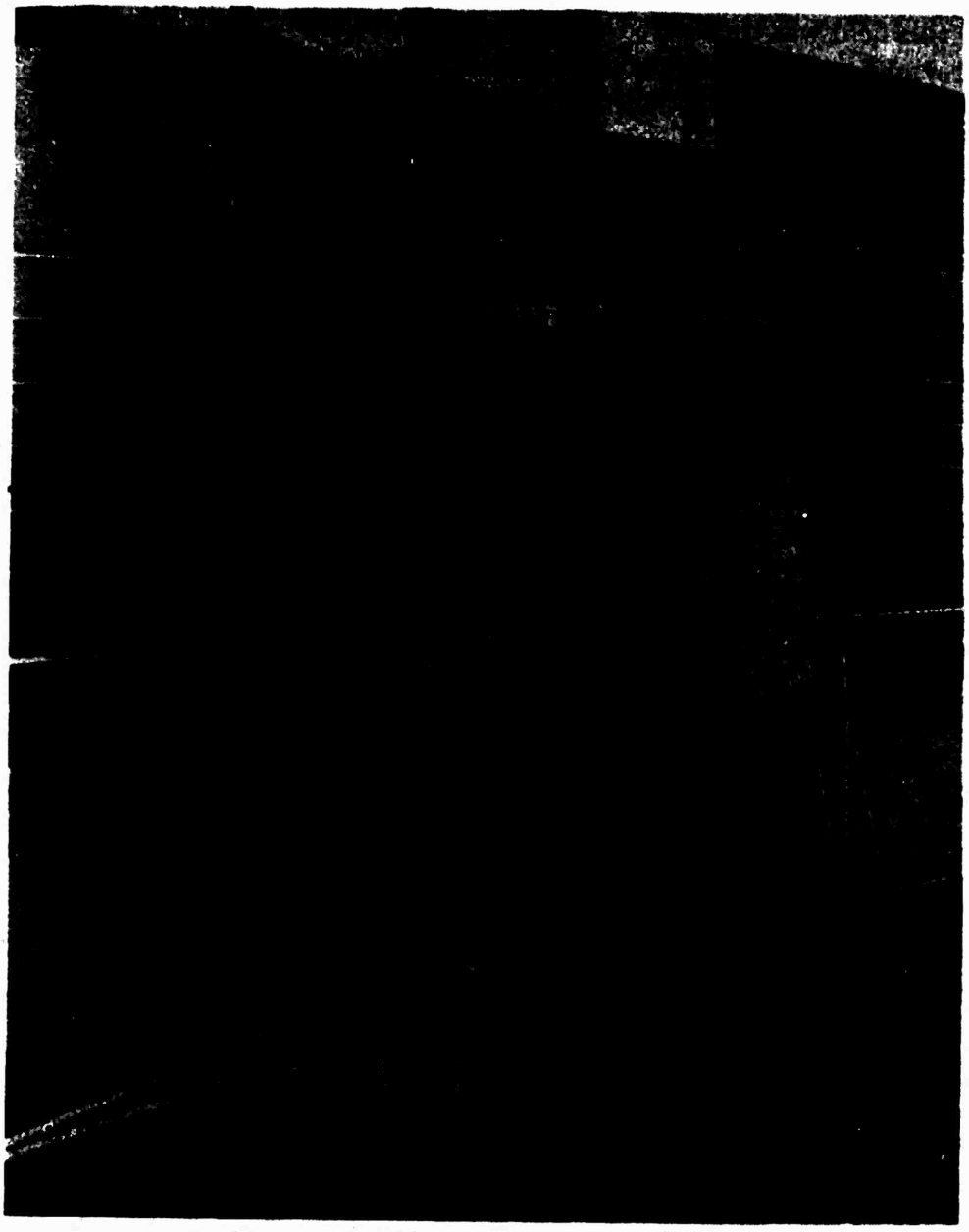
Table 3.—Competencies in which ratings of importance were significantly higher than self-ratings of proficiency (from tables 1 and 2)—Continued

Rank order of importance [1]	TEACHERS OF CHILDREN WITH SPECIAL HEALTH PROBLEMS	Rank order of proficiency [1]
	COMPETENCIES RATED "IMPORTANT"—Continued	
73	A knowledge or understanding of methods and techniques of teaching the hard of hearing child	82
75	The ability to provide for pupils with special health problems opportunities in the curriculum for experience in industrial arts	85

[1] The numbers represent the rank order of importance and proficiency as shown in table 1, page 15 and table 2, page 45. It should be noted that this table reports those competencies on which there was a statistically significant difference between the *average* rating *of* importance and the *average* rating of proficiency, *not* differences between rank order of importance and proficiency. See page 97 for statistical procedures used to determine statistical significance.

than might be desirable in view of the very high evaluations of importance they gave to this competency. Closely related to this is the high importance the teachers placed on knowing the methods and techniques used to teach socially or emotionally disturbed children in contrast to their relatively lower self-ratings of proficiency [CR 35, SH 5]. Teachers of children with special health problems also indicated a need for more preparation in understanding the social and emotional problems which may arise from epilepsy, prolonged illness, or cardiac limitation [SH 3] and in developing skill in motivating pupils who may have become apathetic [SH 9].

Teachers of crippled children have apparently not had opportunity in their professional preparation to gain sufficient knowledge about neurological impairments. There were two competencies dealing with this in the inquiry form, and on both, the teachers in this study rated the importance considerably higher than their own proficiency. One was the ability to use teaching techniques with brain-injured children in keeping with present knowledge of the implications of different types of injury [CR 25]; the other was a knowledge of the difference between teaching-learning processes of the crippled with orthopedic handicaps and those with neurological handicaps [CR 45]. This has very real and urgent implications for those concerned with the qualifications of these teachers at a time when more and more such children, especially those with cerebral palsy, are being admitted to school programs.



Public Schools, Chicago, Ill.

A supportive railing makes it easier for handicapped youngsters to work at the chalkboard.

Although ability to provide experiences in industrial arts ranked low among the "important" competencies, the teachers' self-evaluations of ability were even lower [CR 87, SH 75]. In addition, the teachers of crippled children rated their ability to provide experiences in music [CR 52] and in domestic arts [CR 81] relatively lower than the importance rating would warrant.

This comparison between importance and proficiency focuses attention on the teachers' role in vocational counseling. Some competence

in this field was considered valuable by the teachers, as reported in the previous section. However, their self-evaluations indicate a need to develop more skill in helping pupils with vocational problems and life goals [CR 32, SH 28] and in helping parents understand occupational placement [CR 59, SH 48]. In addition, teachers working with crippled children seem to need help in learning to work more effectively with vocational rehabilitation agencies. [CR 69].

Teachers may be receiving insufficient preparation to work with children who have multiple atypical conditions [CR 43, SH 39], even though they considered it quite important in their current positions. The contrast in ratings of importance and proficiency on the general competency to teach multi-handicapped children was reinforced by a significant difference on more specific types of dual handicaps. For example, teachers of crippled children may not be adequately prepared to work with those children who also have a hearing impairment [CR 84] or defective vision [CR 91].

Importance Rated Lower Than Proficiency

Worth noting are the 15 competencies in the area of the crippled and the 9 in the area of special health problems in which the average ratings of importance were significantly *lower* than the average self-ratings of proficiency. These are listed in table 4. Only one item in each group was among the "very important" competencies. The majority fell into the lower half of the rank order list. It is possible that those toward the end of the competency lists may be knowledge or skills infrequently used by teachers in their day-by-day work. Interpretation of these differences may point to an overemphasis on the competencies in teacher preparation. However, it may be that these selected superior teachers are more competent than the average special teacher. Regardless of the reason, there should be further study of the value of these competencies and of teacher proficiency in them, since the findings from such a study might provide a basis for some revision of teacher-preparation programs.

It is again noteworthy that 7 of the 15 competencies in the area of the crippled are also included among the 9 competencies in the area of special health problems. Both groups of teachers rated their proficiency at a significantly higher level than importance on such technical knowledges as anatomy and physiology [CR 95, SH 65], hospital terminology [CR 97, SH 80], and psychological terminology [CR 85, SH 63]. Ability to administer group tests of intelligence [CR 103, SH 82], and achievement [CR 101, SH 78] were also apparently in excess of their job requirements. Another competence in

Table 4.—Competencies in which ratings of importance were significantly lower than self-ratings of proficiency (from tables 1 and 2)

Rank order of importance [1]	TEACHERS OF CHILDREN WHO ARE CRIPPLED	Rank order of proficiency [1]
	COMPETENCIES RATED "VERY IMPORTANT"	
29	Knowledge or understanding of methods and techniques of teaching the normal child	4
	COMPETENCIES RATED "IMPORTANT"	
70	Ability to work with normal children in helping them to accept the crippled child	33
72	Knowledge or understanding of names, locations, and functions of community nonschool agencies (public and private) serving crippled children and their parents such as hospitals, orthopedic clinics, health departments, and vocational rehabilitation agencies	45
74	Knowledge or understanding of causes of the various types of crippling conditions, such as poliomyelitis, cerebral palsy, and scoliosis	34
76	Ability to organize and plan for adjustments which must be made in carrying out field trips for crippled children	50
77	Ability to tell stories well	29
78	Knowledge or understanding of names, locations, and functions of national voluntary agencies concerned with the education and general welfare of the crippled, such as the Council for Exceptional Children, National Society for Crippled Children and Adults, National Foundation for Infantile Paralysis, and United Cerebral Palsy	52
85	Knowledge or understanding of psychological terminology	74
93	Ability to role-play (substitute for mother or father)	67
95	Knowledge or understanding of anatomy and physiology of the human body	80
97	Knowledge or understanding of medical and hospital terminology	86
99	Ability to take responsibility for or to assist with one or more activities for crippled children, such as Girl or Boy Scouts, hobby clubs, and photographic clubs	92

See footnote at end of table.

Table 4.—Competencies in which ratings of importance were significantly lower than self-ratings of proficiency (from tables 1 and 2)—Con.

Rank order of importance [1]	TEACHERS OF CHILDREN WHO ARE CRIPPLED	Rank order of proficiency [1]
	COMPETENCIES RATED "LESS IMPORTANT"	
101	Ability to administer standardized group achievement tests to crippled children	76
102	Knowledge or understanding of the history of education for crippled children	79
103	Ability to administer group intelligence tests to crippled children	87
	TEACHERS OF CHILDREN WHO HAVE SPECIAL HEALTH PROBLEMS	
	COMPETENCIES RATED "VERY IMPORTANT"	
19	Ability to adjust to interruptions in the child's day for necessary medical treatment, observation, and rest	2
	COMPETENCIES RATED "IMPORTANT"	
41	Ability to draw educational interpretations from case studies	20
63	Knowledge or understanding of psychological terminology	40
65	Knowledge or understanding of anatomy and physiology of the human body	43
78	Ability to administer to these children standardized group achievement tests	30
	COMPETENCIES RATED "LESS IMPORTANT"	
80	Knowledge or understanding of hospital terminology	73
82	Ability to administer to these children group intelligence tests	42
83	Knowledge or understanding of history of education for children with special health problems	74
85	Ability to take responsibility for or assist with one or more activities, such as Girl or Boy Scouts, photographic clubs, and so on	79

[1] This table reports those competencies (listed in tables 1 and 2) on which there was a statistically significant difference between the *average* rating of importance and the *average* rating of proficiency, *not* differences between rank order of importance and proficiency. See p. 97 *for statistical procedures used.*

which both teachers of crippled children and teachers of children with special health problems may receive an overabundance of preparation is a knowledge of the history of education in their special area of exceptionality [CR 102, SH 83].

The confidence expressed by teachers of crippled children in working with normal children [29] probably stems from the fact that most had had experience as regular classroom teachers, rather than from an overemphasis on this in teacher preparation. The difference in importance-proficiency ratings on ability to make the necessary arrangements and adjustments necessary to take crippled children on field trips [76] was largely the result of the low evaluation of importance given to this competence by those who worked in hospital settings. The proficiency ratings given by day school teachers were only slightly higher than their average evaluations of importance on this item.

Directors' and Supervisors' Evaluation of Recently Prepared Teachers

Opinions are also available through this study on the effectiveness of another group of on-the-job teachers of crippled children and teachers of children with special health problems. Special education directors and supervisors in State departments of education and in local school systems answered "yes," "no," or "undecided" to a series of questions related to the professional preparedness of recently graduated teachers in their school systems.[4] Since there were no statistically significant differences between the percent of State and local personnel indicating satisfaction, their responses were combined and may be found in graph 1. (For the percent of each group expressing dissatisfaction or indecision, and for opinions of State and local personnel presented separately, see tables F and G, pages 100 and 102.)

The questions centered on some of the competencies which the participating teachers had evaluated for relative importance, including orientation to other areas of exceptionality, understanding the handicapped child, developing and adjusting curriculum and methods, interpreting and using records and reports, identifying causes of social and emotional maladjustment, and knowing community services. The proportion of responses indicating satisfaction with recently prepared

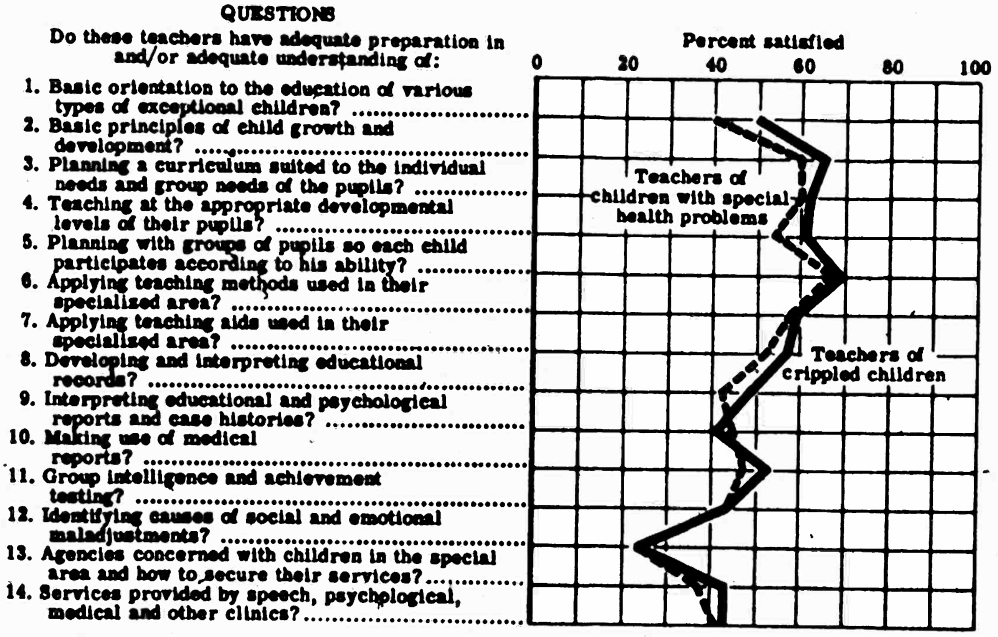
[4] See apendix D, page 119, for the questions as they appeared on the inquiry forms and the instructions given for responding.

teachers of crippled children closely parallels those indicating satisfaction with recently prepared teachers of children with special health problems. In general, the degree of satisfaction was not high, ranging from 24 percent to 69 percent in the area of the crippled and from 24 percent to 67 percent in the area of special health problems.

In the eyes of their supervisors, teachers of crippled children and teachers of children with special health problems are best prepared to make *curriculum adjustments and adaptations* and to use specialized *teaching methods and aids*. However, only about half thought teachers in their school systems had even an adequate *orientation* to the education of *various* types of exceptional children.

Although both groups of teachers were judged to have a fairly sound background knowledge of the *basic principles of child growth and development*, few State and local supervisory personnel thought that the teachers were prepared to *identify causes of social and emotional maladjustment*. Less than half expressed confidence in their ability to interpret *educational and psychological reports and case histories*. These evaluations seem to be particularly meaningful in

Graph 1.—Percent of State and local special education supervisory personnel satisfied with the competence of recently prepared teachers of crippled children and teachers of children with special health problems



NOTE: For the percent replying "No" and "Undecided" to each of the questions, see page 102.

view of the high premium the participating teachers placed on skill in the area of social and emotional adjustment.

Satisfaction with the ability of recently graduated teachers to make use of medical reports or to develop educational records was also approximately 50 percent. State and local leaders made a similar response to the question of teacher understanding of group intelligence or achievement testing. The relatively low opinions on competence with reports and records may be cause for more concern than the opinions related to group testing, since the former were considered so much more important by the successful teachers and were included among the necessary abilities by both competency committees.

Another competence considered relatively important by participating teachers and committee members was ability to work with community agencies and organizations. It is noteworthy, then, that less than half of the supervisory personnel were satisfied that teachers in their school systems knew the services offered by community agencies or clinics and how to secure these services if needed by their pupils.

Experiences Needed in Professional Preparation

OPINIONS on teacher competencies and teacher proficiency presented thus far have many implications for both pre-service and in-service preparation of teachers of children with crippling or special health conditions. One further aspect of this study was consideration of the kinds of practical experiences which would contribute to the development of these necessary competencies. Data fall into four major categories: (1) evaluations of the relative importance of various practical experiences in professional preparation; (2) amount of student teaching or on-the-job teaching of nonhandicapped children needed by those preparing to teach in the special area; (3) amount of student teaching needed in the special area, and (4) combination of professional experiences of the teacher "most likely to succeed."

Practical Experiences in Professional Preparation

Teachers of children who are crippled and teachers of children who have special health problems each evaluated for relative importance a list of experiences in specialized professional preparation. The rating scale was the same as that used for the competencies reported in tables 1 and 2. Experiences rated by teachers of crippled children are arranged in rank order in table 5 and grouped according to average evaluations of importance.[1] Experiences rated by teachers of children who have special health problems are listed in the same way in table 6.

[1] See appendix C, page 98 for statistical procedures used.

Nearly all of the experiences evaluated by teachers of crippled children were also evaluated by teachers of children with special health problems; however, the focus in each list was on practical experience with children in the *respective areas of exceptionality*. Included in both lists are many types of *student teaching*, *planned observation and visits*, and practice in making educational interpretations from various kinds of *tests and records*. All were considered to be "very important" or "important." Neither group of teachers gave an average evaluation of "less important" or "not important" to any of the practical experiences.

Opinions of Teachers of Crippled Children

Top priority was given by the teachers of crippled children to planned observation and student teaching of crippled children in special day schools and classes and at the elementary level, to supervised student teaching of normal children, to observations in cerebral palsy clinics, and to experiences with psychological and educational records and reports on crippled children. (See table 5.) The emphasis on day schools and classes, on experience at the elementary level, and on observation in cerebral palsy clinics undoubtedly reflects to some extent the nature of the teaching situation of a large proportion of the participating teachers.[2] However, when the opinions of those working in day schools and classes were compared with opinions of those in hospitals or convalescent homes, a statistically significant difference was found on only one item: hospital teachers placed greater value on practice teaching in a hospital setting than did day school teachers.[3] Even so, they did not rank this higher than experience in a day school.

In *student teaching*, heaviest weighting was given to experience with nonhandicapped children [2][4] and with crippled children in day schools or classes [3]. Emphasis on student teaching with the nonhandicapped may be related to the fact that only about two-thirds of the participating teachers had a background of student teaching experiences with crippled children, while nearly all had either student

[2] See appendix B, page 90, for the percent of teachers working at each grade level, the type of program in which they were teaching, and the types of crippling conditions of their pupils.

[3] See appendix C, page 97, for statistical procedures employed.

[4] Throughout the report of teacher evaluations of practical experiences, the numbers in brackets refer to the rank order of importance as shown in the left-hand column of table 5.

teaching or regular teaching experience with normal children. Practice at the elementary level [5] received considerably more emphasis than at the nursery [21] or secondary [22] levels. Practice teaching in day schools ranked third, while practicums in residential schools [26], hospital instruction [27], home instruction [28], and convalescent homes [29] were placed at the end of the rank order list, but were still regarded as "important."

Of the 15 kinds of *planned observations and visits* included in the list only 2 were considered to be "very important" by these teachers. Here again the focus is on day school classes [1]. A close second is emphasis on the importance of observing in cerebral palsy clinics [4]. Other ratings in this category reflect a need for teachers to be prepared by preliminary experiences to function as an informed member of a professional team. Relatively high value was placed on opportunities for observing teacher conferences on pupil placement, curriculum adjustment, and child study [8] and on observing multiprofessional case conferences [12]. Closely allied were the high ratings given visits to rehabilitation centers for the crippled [10]

Table 5.—Relative importance which teachers of crippled children placed on some specific experiences in specialized preparation

Rank order of importance [1]	Experience
	ITEMS RATED "VERY IMPORTANT" [2] (1-7)
1	Planned observation in day classes or schools for crippled children
	Supervised student teaching—
2	of normal children
3	of crippled children in special day schools or classes
4	Planned observation in cerebral palsy clinics
5	Supervised student teaching of crippled children at the elementary level
	Experiences in drawing educational interpretations from—
6	psychological reports on crippled children
7	cumulative educational records on crippled children
	ITEMS RATED "IMPORTANT" (8-29)
8	Planned observation of conferences of teachers of the crippled on pupil placement, curriculum adjustment, child study, and so on
9	Experiences in drawing educational interpretations from reports of social workers on crippled children

See footnotes at end of table.

Table 5.—Relative importance which teachers of crippled children placed on some specific experiences in specialized preparation—Con.

Rank order of importance [1]	Experience
	ITEMS RATED "IMPORTANT" (8-29)—Continued
	Planned observation—
10	in rehabilitation centers for the crippled
11	in speech and hearing clinics
12	of multiprofessional case conferences held by representatives from such fields as medicine, psychology, education, and social welfare, to study and make recommendations on individual crippled children
13	Planned visits to observe the work done by speech correctionists
14	Experiences in drawing educational interpretations from medical reports
15	Planned visits to observe the work done by physical therapists
16	Planned visits to observe the work done by occupational therapists
17	Student observation (without active participation) of teaching of crippled children
18	Planned observation in hospitals with facilities for crippled children
	Planned visits to observe the work done by—
19	crippled children's agencies
20	vocational rehabilitation agencies
	Supervised student teaching of crippled children—
21	at the nursery school level
22	at the secondary level
	Planned observation—
23	in residential schools for crippled children
24	in convalescent homes with facilities for crippled children
25	Visits to the homes of crippled children in the company of supervising teachers
	Supervised student teaching of crippled children—
26	in a residential school for crippled children
[3]*27	in hospital classes
28	in home teaching services for crippled children
29	in convalescent home classes
	ITEMS RATED "LESS IMPORTANT"—NONE
	ITEMS RATED "NOT IMPORTANT"—NONE

[1] The rank of each item was determined by the average rating of importance it received from the 137 teachers who answered this question. See page 98 for information on statistical procedures and results.

[2] Items were classified into the four groups of importance according to their average ratings: "very important," "important," "less important," and "not important."

[3] Starred (*) items indicate a statistically significant difference between the average rating of importance given by the 110 classroom teachers and the 40 teachers working in hospitals, sanatoriums, or convalescent homes. See page 98.

and speech and hearing clinics [11]. They also considered it "important" for a teacher-in-preparation to see first-hand the work of speech correctionists [13] physical therapists [15], and occupational therapists [16].

Experiences in *interpreting records and reports* were all ranked in the top half of the list, indicating that teachers would benefit from opportunity to study professional records during their specialized preparation. Considered "very important" were experiences in drawing educational interpretations from psychological reports [6] and cumulative education records [7] on crippled children. Practice in using social work [9] and medical [14] reports was judged to be "important" in the preparation of those who will teach crippled children.

Opinions of Teachers of Children With Special Health Problems

Turning now to the evaluations placed on the list of experiences by teachers of children with special health problems, it can be seen that their opinions coincide in large measure with those of the teachers working with crippled children. Again it should be pointed out that although the lists include similar *types* of practical experiences, the focus in this case is on actual work with children who have special health problems, not crippling conditions. They placed the same emphasis on student teaching with normal children [1] and on specialized student teaching at the elementary level in day schools or classes [2, 10][5] (see table 6). They, too, expressed a need for practice in drawing educational interpretations from records and reports, particularly from psychological [3] and cumulative educational records [4]. Similarly, they placed high value on opportunities for planned observations, emphasizing the need to see a professional team in the process of making a case study and planning programs to meet the needs of individual children with special health problems [5, 6].

One noteworthy difference is the value placed by all of these teachers on student teaching experiences in a hospital [12]. The average evaluation of importance on this item was almost identical with that given by the group of teachers of crippled children who were currently working in hospitals or sanatoriums.

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[5] Again it should be pointed out that of this group of participating teachers of children with special health problems, more than half reported no specialized student teaching in their own professional preparation while all but a few had had either student teaching or regular teaching experience with normal children.

Table 6.—Relative importance which teachers of children with special health problems placed on some specific experiences in specialized preparation

Rank order of importance [1]	Experience
	ITEMS RATED "VERY IMPORTANT" [2] (1-2)
1	Supervised student teaching of normal children
2	Supervised student teaching of children with special health problems at the elementary level
	ITEMS RATED "IMPORTANT" (3-29)
	Experiences in drawing interpretations from—
3	psychological reports
4	cumulative educational records on children with special health problems
	Planned observation—
5	of conferences of teachers of children with special health problems on pupil placement, curriculum adjustment, child study, and so on
6	of multiprofessional case conferences (held by representatives from such fields as medicine, psychology, education, and social welfare) to study and make recommendations on individual children with special health problems
7	Planned observation of work done for children with special health problems in special day classes or schools
8	Student observation (without active participation) of teaching children with special health problems
9	Experiences in drawing interpretations from medical reports
10	Supervised student-teaching of children with special health problems in special day schools or classes
11	Experiences in drawing interpretations from reports of social workers
	Planned observation of work done for children with special health problems—
12	in hospitals
13	in rehabilitation centers
14	in convalescent homes
15	Supervised student teaching of children with special health problems in hospital classes
16	Planned observation of work done for children with special health problems in medical clinics
17	Supervised student teaching of children with special health problems at the secondary level

See footnotes at end of table.

Table 6.—Relative importance which teachers of children with special health problems placed on some specific experiences in specialized preparation—Continued

Rank order of importance [1]	Experience
	ITEMS RATED "IMPORTANT" (3-29)—Continued
	Planned observation of work done for children with special health problems—
18	by rehabilitation agencies
19	by the Crippled Children's Agency
20	by physical therapists
21	by occupational therapists
22	Visits to the homes of children with special health problems in the company of supervising teachers
	Supervised student teaching of children with special health problems—
23	in home instruction programs
24	in sanatoriums
25	at the nursery school level
	Planned observation of work done for children with special health problems—
26	in convalescent home classes
27	in residential schools
	Supervised student teaching of children with special health problems—
28	in sanatorium classes
29	in residential schools
	ITEMS RATED "LESS IMPORTANT"—NONE
	ITEMS RATED "NOT IMPORTANT"—NONE

[1] The rank of each item was determined by the average rating of importance it received from the 76 teachers who answered this question. See page — for information on statistical procedures and results.

[2] Items were classified into the four groups of importance according to their average ratings: "very important," "important," "less important," and "not important." See page 98.

Regular Classroom Teaching Experience

The high value placed on student teaching of normal children by both the teachers of crippled children and the teachers of children with special health problems has just been reported. Opinions were obtained from these same teachers, as well as from other special educators, on the amount of such nonspecialized teaching that should be a prerequisite for teaching in a special area. The inquiry forms contained an ascending scale of time ranging from "none" to "more than three years." Teachers, directors and specialists in State and local school systems, and college staff members checked the amounts they considered "minimal," "desirable," and "ideal."

An overview of the opinions, as presented in table 7, point to three major conclusions: (1) Some teaching experience with normal children is valuable for the prospective teacher of either crippled children or children with special health problems; (2) although very little teaching experience with non-handicapped children might be accepted as a "minimal" prerequisite, actual on-the-job teaching experience with such children is "ideal" preparation; and (3) more than three years of regular classroom teaching experience would not be needed even as an "ideal" amount.

Opinions of a small minority indicate that *minimum* standards, as used in emergency situations, might permit the acceptance of a special teacher without any teaching experience with normal children. The majority, however, would accept nothing less than one semester of student teaching in a regular classroom. Teachers set the highest minimum standards of all, with nearly two-thirds recommending from one to three years of on-the-job teaching with the nonhandicapped.

By unanimous agreement of the four groups of special educators, *desirable* preparation calls for at least student teaching with normal children. A clear majority of teachers and special educators in State departments of education and local school systems favored on-the-job regular classroom teaching as a "desirable" prerequisite. Less than half of the college staff members concurred in this recommendation.

Under *ideal* conditions every teacher of crippled children or of children with special health problems should have had from one to three years of on-the-job teaching experience with nonhandicapped children, according to the special educators participating in the study. Apparently regular classroom teaching, as preparation for special teaching, approaches a point of diminishing return, for few would require more than three years even as "ideal."

Table 7.—Opinions of special educators on the amount of teaching experience with normal children needed by those preparing to teach crippled children or children with special health problems

Teaching experience with normal children	Percent of personnel rating [1]						
	For teachers of children who are crippled				For teachers of children who have special health problems		
	Teacher	State	Local	College	Teacher	State	Local
1	2	3	4	5	6	7	8
Minimal							
None	6	6	11	27	8	7	10
1 semester, half-time student teaching	18	23	33	34	10	23	31
1 semester, full-time student teaching	13	25	14	31	20	27	17
1 year of classroom teaching	35	44	33	8	36	41	29
2 years of classroom teaching	16	-------	6	-------	12	-------	10
3 years of classroom teaching	12	2	3	-------	14	2	2
More than 3 years of classroom teaching	-------	-------	-------	-------	-------	-------	-------
Desirable							
None	-------	-------	-------	-------	-------	-------	-------
1 semester, half-time student teaching	1	2	4	26	9	2	6
1 semester, full-time student teaching	13	9	20	26	19	9	26
1 year of classroom teaching	22	33	33	35	26	30	19
2 years of classroom teaching	43	50	35	13	30	52	43
3 years of classroom teaching	19	6	8	-------	14	7	6
More than three years of classroom teaching	2	-------	-------	-------	2	-------	-------
Ideal							
None	-------	-------	-------	-------	-------	-------	-------
1 semester, half-time student teaching	1	-------	-------	-------	-------	-------	2
1 semester, full-time student teaching	4	-------	4	-------	2	-------	4

1 year of classroom teaching	9	8	21	33	12	7	19
2 years of classroom teaching	16	27	28	42	22	25	24
3 years of classroom teaching	59	61	44	25	59	63	49
More than three years of classroom teaching	11	4	3	--------	5	5	2

[1] Percents are based on the number answering in each category. A total of 310 special educators all having some responsibility for the education of crippled children answered this question: 145 teachers, 55 State directors and specialists, 83 local directors and supervisors and 27 college staff members. A total of 174 special educators with some responsibility for the education of children with special health problems answered this question: 73 teachers, 44 State directors and specialists, and 57 local directors and supervisors. Only 8 college staff members with responsibility for teacher preparation in the area of special health problems replied to this question. Although this was too few to be included in this report, it should be pointed out that their opinions closely paralleled those of the college staff members in the area of the crippled.

Teachers, plus college, State and local personnel, although they differ as to amounts, have affirmed the importance of teaching experience with normal children as a prerequisite for prospective teachers of crippled children or of children with special health problems. Some of the differences on recommended amounts may reflect the current debate over the relative values of a 5-year teacher education program in contrast to offering specialized preparation at the undergraduate level. These opinions have real implications for recruitment of teachers, as well as for programs of professional preparation. It would be unfortunate, however, if prospective teachers of handicapped children were discouraged from the pursuit of such a position simply because they had not as yet had experience teaching normal children. Factors of individual differences and motivations must be taken into consideration, and guidance on the part of college staff and administrators of special education programs is necessary to determine the amounts and kinds of preservice experiences essential for each individual to enter the field.

Amount of Specialized Student Teaching Experience

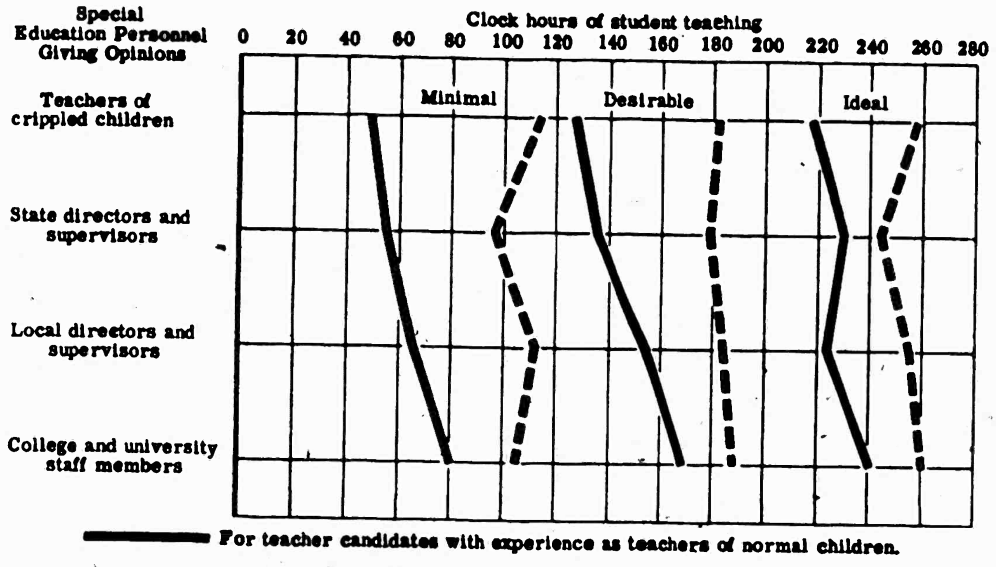
Student teaching in the specialized areas is a generally accepted part of professional preparation to teach crippled children or to teach those with special health problems. The value of a variety of student teaching experiences has been affirmed by the successful teachers. Opinions on the *amount* to be required have varied through the years. Through the inquiry forms, teachers and special educators in State departments, local school systems, and colleges and universities, were asked to consider requirements on three levels: "minimal," "desirable," and "ideal." They were also asked to differentiate between the amount needed by experienced classroom teachers and the amount needed by those who had had only student teaching experience with normal children. Their responses are pictorially shown in graph 2 (crippled) and 3 (special health problems).[6]

Some general conclusions can be drawn immediately from these graphs: (1) Even "minimal" preparation would include some specialized student teaching; (2) amounts increase nearly 100 hours between "minimal" and "desirable" and between "desirable" and "ideal;" (3) candidates with experience as regular classroom teachers require somewhat less specialized student teaching than do those who have had only student teaching experience with normal children.

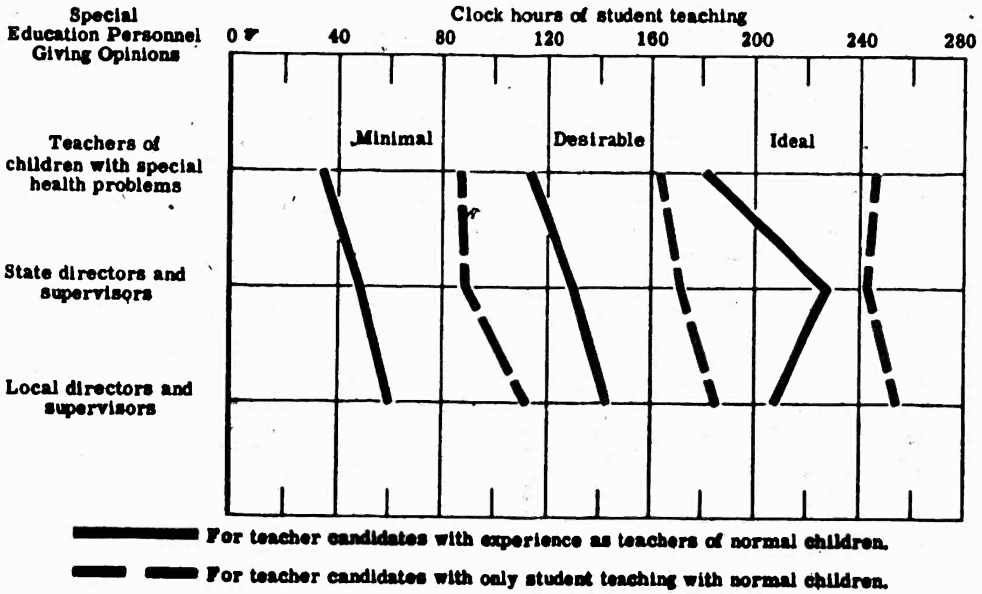
[6] See also tables H and I, pages 104 and 105, for the percent checking each interval on the scale of clock hours used in the inquiry forms.

These findings should receive careful consideration from college staffs responsible for teacher preparation, since current teacher shortages and emphasis on summer school preparation may preclude adherence to ideal or even desirable standards of student teaching experience.

Graph 2.—Opinions of special educators on the amount of specialized student teaching needed by those preparing to teach crippled children



Graph 3.—Opinions of special educators on the amount of specialized student teaching needed by those preparing to teach children with special health problems



For Teachers of Children Who Are Crippled

For a teacher who has already had *on-the-job classroom experience* with normal children, the median opinion of each of the four participating groups of special educators on the "minimum" specialized student teaching requirement ranged from 49 to 80 clock hours. Opinions on the "desirable" amount ranged from 127 to 169, and on the "ideal" from 218 to 240. In each case the teachers set the lowest standard and the college staff members the highest.

For a teacher who has had only *student teaching* experience with normal children, the median range of opinion was narrow, indicating close agreement among the four groups of special educators. According to their replies, about 100 clock hours would be a required "minimum," about 185 would be "desirable," while about 250 would be "ideal."

For Teachers of Children With Special Health Problems

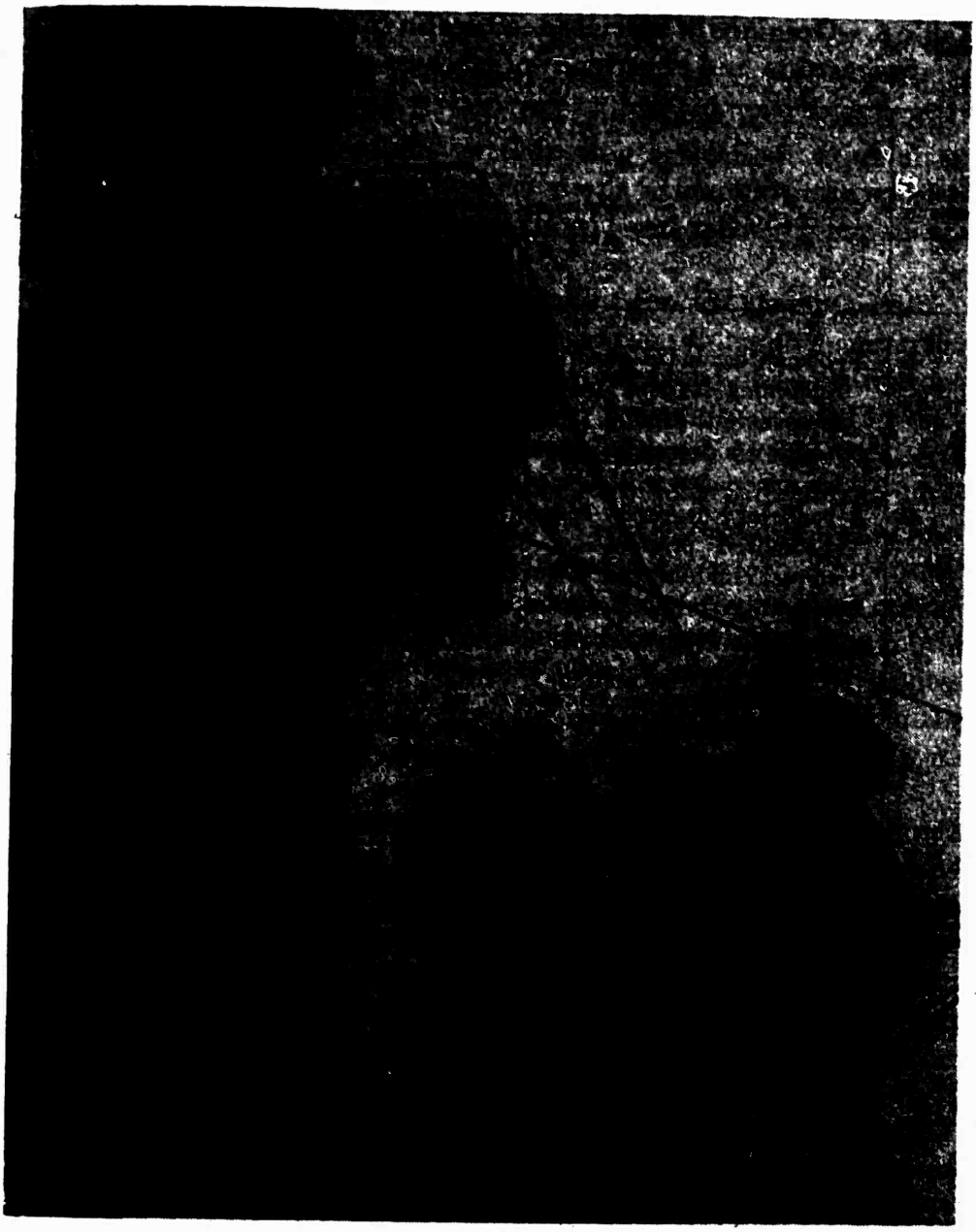
For a teacher with *regular classroom teaching* experience, teachers and State and local special educators favored a "minimum" of about 50 clock hours of student teaching with children having special health problems. As a "desirable" standard, they would raise this to about 130 hours and as "ideal" to about 200 hours. In each case, the average teacher opinion was lower than the average of the directors and supervisors in either the State departments or the local school systems.[1]

For a teacher who has had only *student teaching experience* with the nonhandicapped, about 100 hours of specialized student teaching would be required as a "minimum," 175 as "desirable," and 250 as "ideal."

Professional Preparation of Teacher Candidates Most Likely to Succeed

Teachers of children who have crippling or special health conditions enter the field with various combinations of professional preparation. This study attempted to explore whether some teacher education plans contribute more to teacher success than others. Special educators in State and local school systems and in colleges and

[1] There were not enough college staff members in this area to include their opinions.



Public Schools, Newark, N.J.

A dockside lesson is a vivid learning experience.

universities were asked to consider the relative values of preparation received by six hypothetical teacher candidates and to select the two most likely to succeed. In responding to the question, they were to assume that personal qualifications of the individuals were equivalent. The major variables in the six combinations of preparation included: (a) undergraduate general teacher preparation, (b) undergraduate specialized preparation, (c) graduate specialized preparation, (d)

Table 8.—Opinions of special educators on combination of professional preparation and experience of teachers most likely to succeed

Plan number	Preparation and experience	Percent selecting each candidate [1]	
		Teachers of	
		Crippled [2]	Special health [3]
1	A 1-year graduate program of specialized preparation (including student teaching in the special area) for experienced regular classroom teachers holding a bachelor's degree in general teacher education; teaching experience with *normal* children only.	85	83
2	A bachelor's degree in general teacher education, but no specialized preparation; teaching experience with *normal* children and with children in the special area.	34	33
3	A 1-year graduate program of specialized preparation (including student teaching in the special area) immediately following the completion of a bachelor's program in general teacher education; *no* teaching experience with *normal* children or with children in the special area.	32	34
4	A 4-year undergraduate program of specialized preparation (including student teaching with *normal* children and with children in the special area), but *no* regular teaching experience.	23	21
5	A bachelor's degree in general teacher education, but no specialized preparation; teaching experience with *normal* children only.	3	5
6	A bachelor's degree in general teacher education (including student teaching of *normal* children); *no* teaching experience with either *normal* children or children in the special area.	1	2

[1] Percent is based on total number of persons responding to the question as a whole and adds to more than 100 since each person was allowed two choices.

[2] A total of 167 special educators with some responsibility for the education of children who are crippled gave opinions: 55 directors and specialists in State departments of education, 87 directors and supervisors in local school systems, and 25 college staff members.

[3] A total of 103 special educators with some responsibility for the education of children with special health problems gave opinions: 46 State directors and specialists in State departments of education and 57 directors and supervisors in local school systems.

student teaching of normal children, (e) student teaching in the special area, (f) regular classroom teaching experience, and (g) teaching experience in the special area without professional preparation. All combinations of these elements were not included in the six choices. They represent rather the extremes of the range and some of the more common situations met in practice. Descriptions of the plan of preparation of the six candidates and the choices of the special educators are presented in table 8.

It was generally agreed that experienced teachers of *normal* children with one year of *specialized graduate* preparation are best qualified to work with children who are crippled or who have special health problems. Most of the participating special educators chose plan 1 which included general teacher preparation, graduate specialized preparation (with student teaching), and teaching experience with normal children.

No other plan received a majority vote from the group. Plan 3, which is identical with plan 1 except that it omits regular classroom teaching experience, was selected by only one-third of the educators. Plan 2, quite different from either plan 1 or 3, was also selected by only one-third of the group. The candidate would have a bachelor's degree in general education and teaching experience both with normal children and with children in the special area of exceptionality. However, the element of specialized preparation is excluded. This candidate is apparently typical of one chosen from the regular school faculty who receives his specialized preparation while on the job in a special education program. Only a negligible number of choices went to plans 5 and 6, which omitted the elements of experience in the special area, either through specialized preparation or through actual teaching experience.

Teacher candidates with dual preparation on the undergraduate level, as described in plan 4, were chosen as most likely to succeed by a little less than one-fourth of the special educators. Comparing this with plan 3, it can be seen that the factor of graduate or undergraduate preparation is the only difference. Only when regular classroom teaching experience is combined with graduate specialized preparation as in plan 1 did a clear majority of the special educators favor one or the other level of preparation. Further study of the relative value of graduate and undergraduate programs of specialization is indicated.

All of these conjectures as to possible success of a teacher are of course contingent on his personal qualifications and his interest in working with crippled children or with children who have special health problems.

Summary

CHILDREN with crippling conditions or with special health problems may require adjusted education in a special day school, special class, hospital, convalescent home, sanitorium, or in their own homes. Regardless of where they are taught, these children need teachers who understand them and who are professionally prepared to work with them. Opinions to this effect were expressed by all four groups of special educators who completed inquiry forms and by committees of experts who wrote the competency reports included in this publication. The validity of the findings rests on the expertness of these participants, all of whom are experienced educators in one or both of these two areas of exceptionality. Included among them were successful teachers, directors and specialists in State departments of education, directors and supervisors in local school systems, and staff members in colleges and universities.

It is hoped that this report will prove useful to persons concerned with professional standards and with professional preparation for teachers of children who are crippled and for teachers of children who have special health problems. It is further hoped that the findings will contribute to the professional development of teachers themselves as they strive to acquire new knowledge and increase their own skills in bringing these children improved educational opportunities.

Findings

■ According to the competency committee members and the teachers participating in this study, a wide range of knowledges and abilities is necessary for effective work with crippled children or with children who have special health problems. A professionally qualified teacher will have a background of knowledge about various health conditions,

including medical information, the implications of various diagnoses and prognoses for educational programs, and the possible effects on a child's social and emotional adjustment. Special abilities needed by teachers of both groups of children center around: (1) Understanding the child and his particular problems, both medical and social or emotional; (2) adapting the curriculum, teaching methods, and materials to the specific needs of individual pupils; (3) using reports and records from other teachers, as well as from medical, psychological and social work personnel; (4) cooperating, as an educational specialist, with other professional personnel, in evaluating the needs of each child and planning an educational program which will be well integrated with the other required services; and (5) helping parents with the various problems which arise because of having a cripped child or a child with special health problems in the family.

■ Personal characteristics received considerable attention from the teachers and the committee members. The importance of teacher ability to accept the child despite the severity of his handicapping condition was emphasized. The crippled child's different appearance, awkward movements, or need for unusual physical care may be disturbing to the average teacher. To bring this child a worthwhile and wholesome educational experience, the teacher must be flexible and resourceful. Teaching must be adjusted and scheduled around possible interruptions for rest, therapy, and other special services needed by the pupil. Emotional stability, physical stamina, and acceptance of realistic goals are essential.

■ Self-ratings of the participating teachers on the list of competencies and evaluations made by State and local supervisory personnel of recently prepared teachers in the two areas, suggested that teachers are *best* prepared to make necessary curriculum adaptations and modifications and to use specialized teaching methods and materials and are *least* prepared to understand social and emotional problems and to deal with them effectively.

■ Experiences which the successful teachers thought would be valuable to include in professional preparation are (1) Student teaching with normal children; (2) student teaching in a variety of settings, but particularly in special day schools or classes; (3) practice in developing educational records on individual children and in making educational interpretations from medical, phychological, and social work reports; (4) planned observations of educational programs in a variety of settings and of community agencies and clinics; and (5) planned observations of multiprofessional case conferences. With the exception of teaching normal children, each of these would provide opportunity for *practical experience in the special area of exceptionality.*

■ Under ideal conditions, every teacher of children with crippling conditions or special health problems will have had from one to three years of regular classroom teaching experience, according to the four groups of special educators participating in the study. Only a very small minority recommended accepting a teacher for one of these specialized areas without at least student teaching experience with nonhandicapped children.

■ A differentiation was made by the four groups of special educators between the amount of specialized student teaching which should be required in the professional preparation of a teacher who has had regular classroom teaching experience and one who has had only student teaching experience with normal children. For the first group, an "ideal" amount is about 225 hours for a teacher preparing to work with crippled children and 200 for those preparing to teach children with special health problems. For the second group, the amount should be increased to about 250 hours for prospective teachers in either of the two areas. Even as a "minimum," the participating special educators would expect the experienced teacher to have about 50 clock hours of specialized student teaching. They would double this amount for the person with only student teaching experience with normal children.

■ From a list of hypothetical candidates for teaching crippled children and children having special health problems, a clear majority of each of the four groups of special educators picked as the "most likely to succeed" one who had (1) a bachelor's degree in education, (2) regular classroom teaching experience, and (3) 1 year of graduate specialized preparation, including student teaching in the special area.

Implications

The findings from this study, based on the thinking of persons experienced in the education of children with crippling conditions or special health problems, have many implications for professional standards and preparation as well as for inservice education. Some of these were pointed out by the work conference participants who reviewed the findings from the overall study as they pertained to these two areas of exceptionalty.[1] Others have been suggested by consultants and specialists in these two fields as they studied the findings reported in this publication. Only the more general and overall im-

[1] See page v for a list of work-conference participants.

plications will be suggested here. The reader will undoubtedly find many more specific implications as he studies the report in relation to his own situation—as a teacher of one of these groups of children, as a supervisor of such teachers, as a director responsible for initiating and administering special education programs in a local school system, or as a college staff member responsible for the professional preparation of these teachers.

■ The broad range of competencies identified for teachers in the two areas suggest two major implications: (1) That colleges or universities undertaking the professional preparation of these teachers have sufficient resources, particularly faculty members qualified in these special fields, and (2) that State and local school systems provide consultation and inservice opportunities to assist the teacher with his continued professional development. This is particularly important in the present period of rapid accumulation of new knowledge in such fields as medicine, sociology, and education.

■ Further study is needed of the types of disabilities among school age children being educated in programs for "crippled" children and in programs for children with "special health problems." The number and types of disabilities among pupils of the teachers in this study suggests that there may be considerable overlapping in practice between the two categories. If this is true, it has considerable implications for professional preparation. While the *kinds* of competencies essential for effective teaching in these two areas are somewhat parallel, it will be remembered that in this report they were defined as *specific* to each area. Diagnostic information, for example, would have to be extended across the whole range of disabilities if teachers were prepared to work with children in both categories. This raises questions which need immediate and comprehensive study. What kinds of special learning problems do children with each of the various disabilities have? What effect does the specific health condition have on the program planning? What are the specific educational needs of children with neurological impairments many of whom are now being educated as "crippled?" What is the nature and extent of multiple handicaps in children who are now classified as "crippled" or as having "special health problems?" Answers to these questions become even more vital as the number of local public school systems providing special education programs for these children continues to increase.

■ If teachers of crippled children and teachers of children with special health problems are to perform more effectively the wide range of tasks which make up their teaching day, much strengthening of professional qualifications is indicated, both by the self-ratings of the participating teachers and the evaluations of recently prepared teach-

ers by their supervisors. Satisfaction with competence in curriculum adaptations and modifications and with use of specialized teaching methods and materials, was not as high as might be expected. Even so, this was the function teachers seemed best able to perform.

■ There were other aspects of the teachers' functions for which they are apparently not so well prepared. One of the most pressing of these has to do with the problems faced when teaching children who have social or emotional problems. Again and again in this study, findings pointed to the need for more opportunity to study and understand social and emotional problems, especially those having their origin in the child's disability. Supervised experiences are needed which will develop and improve teacher ability to constructively help both pupils and parents with these problems. This requires parallel skills in guidance and referral, based on a knowledge of specific counseling techniques and an awareness of problems which should be referred to specialists in other professional fields.

■ Teachers need to further develop their own skills in working with other professional persons and to make full use of related community agencies and clinics, according to the findings of this study. It appears that they also need to improve their ability to use a variety of records and reports. Teachers with these competencies will be in a better position to contribute to the optimum development of each individual child and to integrate the educational program with whatever medical, social, or psychological services he may require.

■ The experiences in professional preparation which were thought to contribute to the development of desirable teacher competencies also seem to have implications for both preservice and inservice education. The teacher preparation institutions should have access to a wide variety of educational programs and community resources. They must have specialists who can provide teachers with experiences in making valid educational interpretations from medical, psychological, and social work reports as well as experience in developing and using cumulative educational records. There must be opportunity for sustained and well supervised student teaching with children having the types of crippling or special health conditions with which the teacher is preparing to work. Ideally this would take place in a variety of settings—in special classrooms, in hospitals, in convalescent homes, and in the children's own homes. It is apparent, too, that additional consultation should be available within the local school system as teachers begin to apply their knowledge and experience to the specific community in which they teach. Orientation to the various agencies, clinics, and organizations would seem to be a "must" if children are to be assured of benefiting from all the resources available to them.

■ The apparent influence of certain personal characteristics on successful teaching in these areas points to the need for careful screening of those seeking to enter programs of professional preparation. More objective criteria will be needed to form the basis for guidance of teachers as they consider education of children with crippling conditions or special health problems as a prospective career.

■ Emphasis on a background of regular teaching experience with normal children, plus the extent of specialized knowledges and abilities required for effective teaching in these special areas, strongly suggests a graduate program of professional preparation. It is unlikely that the high standards set by the participants in this study could be achieved in a four-year program at the undergraduate level. Further, with the rapid changes taking place in these areas of special education and in related medical fields, it is urgent that the teacher on the job, with the assistance of qualified supervisors in State and local systems, be encouraged to continually improve his professional competence in providing special education to children who are disabled by crippling conditions or by special health problems.

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Appendix A

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

THIS PROJECT was undertaken by the Office of Education in collaboration with many leaders in special education from all parts of the Nation, and with the special help of the Association for the Aid of Crippled Children, 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 otherwise to facilitate the project. The study also had the counsel of a number of consultants who reviewed written material and made suggestions as to personnel and procedures. (A complete list of the committee members and consultants appears on pages II–V.)

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 problems, such as rheumatic fever. Separate studies were also made of special education administrative and supervisory personnel (11) in State departments of education,

and (12) in central offices of local school systems. Still another study was made of (13) instructors in colleges and universities preparing teachers of exceptional children. Thus, incorporated into the broad project were 13 smaller studies.

Two techniques were used to gather data concerning the qualification and preparation needed by special education personnel. One was by means of a series of *inquiry forms;* the other by means of a *committee statement* describing desirable competencies. The plan of the study 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 the 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 the inquiry forms. There were 13 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. Committees were composed of from 8 to 12 leading educators in their area of interest who, insofar as possible, had engaged in college teaching, had held supervisory positions in State or local school systems, and who had classroom teaching experience with exceptional children.

Three major conferences on the study were called. In September 1952 private agencies interested in gifted and handicapped children met with the Office of Education staff and the National Committee. In March 1953 the Commissioner of Education called a 3-day conference on distinctive competencies required by special educators. In October 1954, a week's work conference was convened in Washington, 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 coming from such a study, representing the point of view 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

Background Information About the Participating Teachers

THE DESIGN of the study called for at least 100 superior teachers in each area of exceptionality to supply facts and opinions through an extensive inquiry form. Effort was made to secure a representative sampling of such teachers throughout the Nation by establishing a quota for each State and by providing guidelines for the selection of teachers within each State. State quotas were established with the help of the Educational Statistics Branch of the U.S. Office of Education. Among the factors considered in establishing the quotas were child population and number of pupils enrolled in special education facilities for each type of exceptional child.

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

In order to obtain a sufficient number of usable inquiry forms from teachers who would meet the criteria set by the study, it was decided to compile a list of approximately 200 names in each area of exceptionality. Inquiry forms were mailed to all those whose names and addresses were submitted by State departments of education. The results were as follows:

Number of inquiry forms	*Crippled*	*Special health problems*
Mailed	323	156
Completed and returned	230	103
Used	150	85

Some of the inquiry forms which were not used were filled in by persons who did not meet all of the criteria set forth for participation in the study; others arrived too late to be tabulated.

Certain background information about the school situations in which the participating teachers were employed, the grade levels at which they were teaching, the types of crippling conditions or special health problems of their pupils, as well as about their own professional preparation is presented here. It is not intended that this should have any program implications. The data were obtained from a sample of successful teachers in these two areas of exceptionality, *not* from a sample of programs. The information is presented solely to aid the reader in making interpretations of the opinions reported in this publication.

The personal data obtained from the participating teachers indicate that they were working in a variety of settings (table A). Of the 150 teachers of crippled children, about three-fourths were teaching in day classes; the other one-fourth were teaching in hospitals, convalescent homes, or sanatoriums. Of the 85 teachers of children with special health problems, about one-third were classroom teachers in day school programs, one-third were giving home instruction, and another one-third were teaching in hospitals, convalescent homes, or sanatoriums.

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

Type of organization	Percent of teachers	
	Crippled	Special health problems
Total	100	100
a. Special day school [1]	22	2
b. Special day school for various types of handicapped children	15	7
c. Single multigrade special class in a regular day school [1]	17	14
d. Center of two or more special classes in a regular day school [1]	20	7
e. Hospital class	22	25
f. Convalescent home class	3	1
g. Sanatorium class	1	5
h. Home instruction		39

[1] Inquiry forms filled in by teachers of crippled children specified a special unit for crippled children; inquiry forms filled in by teachers of children with special health problems specified a special unit for such children.

Many of the participating teachers reported that they taught a wide range of grade levels (table B). Nearly all had some pupils at the elementary level. About one-fourth of the teachers of crippled children included pupils at the nursery or kindergarten level, and about one-fourth at the secondary level. In contrast, only about one-tenth of the teachers of children with special health problems included pupils at the nursery or kindergarten level, while nearly one-half taught those at the secondary level.

Table B.—Grade levels taught by the participating teachers

Grade level	Percent of teachers	
	Crippled	Special health problems
Total	100	100
Nursery or kindergarten *only*	7	----
Nursery or kindergarten *and* elementary	16	4
Elementary *only*	54	48
Elementary *and* secondary	15	25
Secondary *only*	4	16
Nursery or kindergarten, elementary *and* secondary	4	7

Perhaps of most interest, because of the opinions expressed in this study, is a summary of the types of crippling conditions and special health problems included among the pupils taught by the participating teachers (table C). The majority of teachers of crippled children were working with those who had cerebral palsy (85 percent), crippling conditions due to an infection such as poliomyelitis or osteomyelitis (66 percent) and congenital anomalies (54 percent).

The majority of teachers of children with special health problems were working with children who had cardiac conditions (70 percent). No other special health problem was reported by more than half of the participating teachers working in this area.

Of the total pupils taught by the participating teachers of crippled children, 29 percent had cerebral palsy, 23 percent had crippling conditions due to infections, 12 percent had cardiac conditions, and 10 percent had congenital anomalies. Of the total pupils taught by the participating teachers of children with special health problems, 18 percent had cardiac conditions, 15 percent had tuberculosis, 10 percent had kidney ailments, and 10 percent had crippling conditions due to infections.

Table C.—Types of crippling conditions or special health problems of children taught by the participating teachers

Type of crippling condition or special health problem	Percent [1] of teachers of children with—		Percent [2] of pupils being taught by teachers in the area of—	
	Crippling conditions	Special health problems	Crippled	Special health problems
1	2	3	4	5
Arthritic defects	3	20	([3])	4
Asthma	1	36	([3])	3
Cardiac conditions (including those resulting from rheumatic fever)	47	70	12	18
Cerebral palsy	85	21	30	2
Congenital anomalies such as club foot or spina bifida	54	11	10	1
Cosmetic defects	-------	5	-------	([3])
Crippling conditions due to infections, such as poliomyelitis, tuberculosis of the bone, or osteomyelitis	66	40	24	10
Diabetes	1	14	([3])	3
Epilepsy	3	25	([3])	1
Malnutrition	-------	31	-------	8
Muscular dystrophy	10	9	1	([3])
Nephritis and other kidney conditions	5	43	([3])	10
Traumatic conditions (including amputations, burns, fractures, and other injuries)	33	22	8	1
Tuberculosis	2	30	([3])	15
Other	60	68	14	23

[1] Percents are based on data supplied by 146 of the 150 teachers of children who are crippled and 81 of the 85 teachers of children with special health problems.

[2] Percents are based on the 2,899 pupils reported by teachers of crippled children and the 2,027 reported by teachers of children with special health problems. Some teachers gave an "at date" figure, while others included their total pupils over a year's period.

[3] Less than 0.5 percent.

A variety of crippling conditions and special health problems other than those listed in table C were reported by 66 percent of the teachers of crippled children and 54 percent of the teachers of children with special health problems. These "other" conditions represented about one-fifth of the total pupils being taught by both groups of teachers.

The overlap between the two categories "crippled" and "special health problems" is most evident in the percent of teachers reporting responsibility for pupils with cardiac conditions, crippling condi-

tions due to infections, traumatic conditions such as burns, cerebral palsy, and muscular dystrophy.

About two-thirds of the teachers in this study received their specialized preparation *after* having had teaching experience with normal children. Only one-third had received specialized preparation before teaching children who were crippled or who had special health problems (table D). Most of them took this specialized preparation at the graduate level (table E).

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

Time of preparation	Percent of teachers	
	Crippled	Special health problems
Total	100	100
Before teaching normal children	24	36
After teaching normal children	71	60
No reply	5	4
Total	100	100
Before teaching children in the special area	35	36
Concurrently with teaching children in the special area	60	60
No reply	5	4

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

Type of preparation	Percent of teachers	
	Crippled	Special health problems
Total	100	100
Graduate	61	54
Undergraduate	32	42
Residential school for crippled children (independent of a degree-granting institution)	2	----
Inservice	1	----
No reply	4	4

Appendix C

Statistical Procedures and Results

Statistical Procedures Used To Analyze Data Reported in Tables 1 and 2

Each of the 103 competencies (knowledges and abilities) listed in table 1 was rated in two ways by the 150 participating teachers of crippled children. First they checked whether, in their judgment, each item was "very important," "important," "less important," or "not important" in their present position. Second, they checked whether they considered themselves to be "good," "fair," or "not prepared" in each of these competencies. A separate list of 85 competencies (listed in table 2) was rated in the same manner by 85 participating teachers of children with special health problems.

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 the particular item.

The *average proficiency* of the teachers was computed in the same way using, in the area of the crippled, a numerical value of 3.98 for "good," 2.80 for "fair," and 1.61 for "not prepared," and in the area of special health problems 4.02 for "good," 2.71 for "fair," and 1.39 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. In the area of the crippled, for example, they were derived as follows: The average rating of importance was found for all the competencies rated by teachers of crippled children. This average was 3.37. Then the standard deviation was found for this distribution; it was 0.78. 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 2.49. Then the standard deviation was found for this distribution; it was 0.66. The z-scores of the second distribution were equated to the corresponding z-scores of the first. For example, the z-score for 3 in the distribution of proficiency ratings was found to be $(3-2.49)/0.66$, which equals $+0.78$. Using the standard deviation of the first distribution as a unit, this yields $+0.78\times0.78$ or $+0.61$. Adding 0.61 to the mean of the first distribution yields 3.98. This is the converted score assigned to the checks in the "good" column.

A *rank order* of each list of 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 rated by teachers of crippled children have been arranged according to rank order of importance in table 1, page 15, and items rated by teachers of children with special health problems are arranged in the same manner in table 2, page 45. The rank order of proficiency is indicated by a rank order number in the right hand column of tables 1 and 2. Rank order numbers and the range of average ratings of the 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.

Ratings by teachers of children who are crippled

Category	*Range of average ratings*	*Rank order numbers*
Very important	3. 50–3. 94	1–47
Important	2. 51–3. 49	48–100
Less important	2. 32–2. 49	101–103
Not important	None	None
Good	3. 39–3. 96	1–58
Fair	2. 42–3. 38	59–103
Not prepared	None	None

Ratings by teachers of children with special health problems

Category	*Range of average ratings*	*Rank order numbers*
Very important	3. 51–3. 89	1–26
Important	2. 54–3. 48	27–79
Less important	2. 12–2. 48	80–85
Not important	None	None
Good	3. 52–3. 94	1–26
Fair	2. 17–3. 49	27–85
Not prepared	None	None

Covariation Between Ratings of Importance and Ratings of Proficiency

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

The statistical significance of each contingency coefficient was computed using the chi-square teaching, 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, not only was the actual value of C computed, 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 in the area of the crippled was 0.26, with a range from 0.15 to 0.36 in a situation where the maximum possible value of the median coefficient of contingency would be 0.60 with a range from 0.50 to 0.78.

The median coefficient of contingency on the 10 items in the area of special health problems was 0.30 with a range from 0.13 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 0.53 to 0.77.

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 of teachers of crippled children on an item, the procedure employed was as follows: The difference between the ratings of importance and proficiency ("converted scores") for each teacher was determined (I_1-P_1 through $I_{150}-P_{150}$, where the subscripts 1 and 150 represent the teachers answering the question). The average difference between the ratings for all teachers was calculated $\left(\frac{\Sigma D}{N}\right)$ the standard deviation $\left(\sqrt{\frac{\Sigma D^2}{N}-(M_D)^2}\right)$ and the standard error of the average of the differences $\left(\frac{\sigma_D}{\sqrt{N}}\right)$ was computed; the average difference was expressed in z-score units $\left(\frac{M_D}{\sigma_{M_D}}\right)$ (this is the critical ratio); and the probability of a mean difference as large as, or larger than, the one obtained for a given item 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. The same procedure was used to determine the statistical significance of the difference between the average importance rating and the average self-competence ratings by teachers of children with special health problems.

In the procedure described above, only *paired* ratings were employed; thus, if a teacher rated an item for importance, but failed to make a proficiency rating for the item, it was impossible to determine the difference between importance and proficiency of that teacher for that item. His response to this item was therefore not usable in this calculation. The ratings of *all* teachers were used in obtaining both the averages for importance and for proficiency on which the ranks in table 1 and table 2 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, 28 in the area of the crippled and 22 in the area of special health problems showed a statistically significant difference between ratings of importance and proficiency. (See items marked *sd* in the left-hand column of tables 1 and 2.)

Statistical Procedures Used to Analyze Data Reported in Tables 5 and 6

The teachers rated the relative importance of a list of experiences by checking whether, in their judgment, it was "very important," "important," "less important," or "not important" to include the experiences in specialized preparation. 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 for teachers of children who are crippled and teachers of children with special health problems was then determined on the basis of their average ratings of importance. The items have been arranged in tables 5 and 6, respectively, 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.

Ratings by teachers of children who are crippled

Category	*Range of average ratings*	*Rank order numbers*
Very important	3.60–3.63	1–7
Important	2.54–3.46	8–29
Less important	None	None
Not important	None	None

Ratings by teachers of children who have special health problems

Category	*Range of average ratings*	*Rank order numbers*
Very important	3.51–3.60	1–2
Important	2.60–3.49	3–29
Less important	None	None
Not important	None	None

Comparison of Opinions of Teachers in Various Educational Settings and Opinions of Teachers With Specalized Preparation Before and Since January 1946

The inquiry forms filled out by the 150 teachers of crippled children were grouped, for purposes of statistical comparisons, into three categories: those filled in by 50 teachers working in day school classes who

had completed their specialized professional preparation *before* January 1, 1946; those filled in by 60 teachers working in day school classes who had completed their specialized professional preparation *since* this date; and those filled in by 40 teachers working in hospitals, sanatoriums, or convalescent home classes. The sample of teachers in this last group was too small to be divided according to the date they had completed their preparation.

The inquiry forms filled out by the 65 teachers of children with special health problems were grouped, again for comparative purposes, into three categories: (1) those filled in by 26 teachers in day school classes, (2) those filled in by 33 teachers in home instruction programs, and (3) those filled in by 26 teachers in hospitals or convalescent homes. No comparisons were made between the opinions of teachers prepared before January 1, 1946 and since that date.

Differences in opinion concerning the importance of the items listed in tables 1, 2, and 5 were tested for statistical significance. For each item the average importance rating for the two groups was computed: $\left(M_1=\frac{\Sigma fX_1}{N_1}\right)$ where X_1 represents the ratings of importance of teachers prepared prior to 1946, and $\left(M_2=\frac{\Sigma fX_2}{N_2}\right)$ where X_2 represents the ratings of importance of teachers prepared since 1946. The estimated standard deviation of the universes of which the X_1 and X_2 scores were samples were computed $\left(\hat{\sigma}_1=\sqrt{\frac{\Sigma fx_1^2}{N_1-1}}\right)$ and $\left(\hat{\sigma}_2=\sqrt{\frac{\Sigma fx_2^2}{N_2-1}}\right)$ and the estimate of the standard error of the difference between the averages was determined $\left(\hat{\sigma}_{M_1-M_2}=\sqrt{\frac{\hat{\sigma}_1^2}{N_1}+\frac{\hat{\sigma}_2^2}{N_2}}\right)$. The observed difference between the averages of the two samples (M_1-M_2) was then expressed in z-score units $\left(\frac{M_1-M_2}{\hat{\sigma}_{M_1-M_2}}\right)$. 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 these groups 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 $\left(\frac{x}{\sigma}\right)$ from the Mean"). The same method was used to compare evaluations made by teachers working in different educational settings.

Findings are reported for the total teachers, since few statistically significant differences of opinion were found between these subgroups. Where such differences do occur, they have been pointed out in the tables or text.

Table F.—Opinions of special education supervisory personnel [1] on the competence of recently prepared teachers of crippled children

Question	Percent checking					
	State personnel			Local personnel		
	Yes	No	Undecided	Yes	No	Undecided
1	2	3	4	5	6	7
Do these teachers have adequate preparation or experience in, and/or adequate understanding of:						
Basic orientation to the education of various types of exceptional children?	60	27	13	43	36	21
Basic principles of child growth and development?	55	26	19	70	14	16
Planning a curriculum suited to the individual needs and group needs of the pupils?	59	18	23	63	13	24
Ascertaining and teaching at the appropriate developmental levels of their pupils?	68	17	15	57	17	26
Planning with groups of pupils so each child participates according to his ability?	67	13	20	71	9	20
Applying teaching methods used in their specialized area? [2]	51	36	13	63	11	26
Applying teaching aids used in their specialized area? [2]	51	36	13	60	11	29
Developing and interpreting educational records?	49	35	16	47	29	24
Interpreting educational and psychological reports and case histories? [3]	39	48	13	42	35	23
Making use of medical reports? [3]	39	48	13	59	22	19
Group intelligence and achievement testing?	46	35	19	42	29	29
Identifying causes of social and emotional maladjustment?	19	60	21	28	43	29
Agencies concerned with crippled children and how to secure their services?	51	38	11	38	41	21
Services provided for crippled children by speech, psychological, medical, and other clinics?	45	38	17	42	40	18

[1] A total of 130 special educators answered this question: 48 directors and specialists in State education departments and 82 directors and supervisors in local school systems. All had some responsibility for the education of crippled children. [2] Combined question to State personnel. [3] Combined question to State personnel.

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. That is, 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, $'p_1=\sqrt{\frac{p_1q_1}{N_1}}$ and $'p_2=\sqrt{\frac{p_1q_2}{N_2}}$. 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, $'p_1-p_2=\sqrt{\sigma^2p_1+\sigma^2p_2}$. 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.

The percents shown in graph 1, page 62, are based on the number of persons answering each particular question. Questions 6 and 7 and questions 9 and 10 were combined in the inquiry form filled out by State personnel. (See pages 119–120.) In each case the percent of satisfied responses was used twice on the graph and in tables F and G to make possible some comparison with the responses of local personnel on these four questions. State personnel evaluated teachers prepared within the 5-year period preceding the study; local personnel evaluated teachers prepared within the 7-year period preceding the study.

Table G.—Opinions of special education supervisory personnel [1] on the competence of recently prepared teachers of children with special health problems

Question	Percent checking					
	State personnel			Local personnel		
	Yes	No	Undecided	Yes	No	Undecided
1	2	3	4	5	6	7
Do these teachers have adequate preparation or experience in, and/or adequate understanding of:						
Basic orientation to the education of various types of exceptional children?	49	28	23	34	47	19
Basic principles of child growth and development?	53	28	19	66	14	20
Planning a cirriculum suited to the individual needs and group needs of the pupils?	49	21	30	68	16	16
Ascertaining and teaching at the appropriate developmental levels of their pupils?	55	9	36	54	17	29
Planning with groups of pupils so each child participates according to his ability?	55	10	35	75	6	19
Applying teaching methods used in their specialized area? [2]	49	31	20	65	14	21
Applying teaching aids used in their specialized area? [2]	49	31	20	55	18	27

Developing and interpreting educational records?	34	37	29	48	26	26
Interpreting educational and psychological reports and case histories? [3]	39	44	17	50	35	15
Making use of medical reports? [3]	39	44	17	53	18	29
Group intelligence and achievement testing?	42	26	32	44	31	25
Identifying causes of social and emotional maladjustment?	16	62	22	30	42	28
Agencies concerned with children with special health problems and how to secure their services?	40	40	20	35	40	25
Services provided for children with special health problems by speech, psychological, medical, and other clinics?	38	46	16	43	41	16

[1] A total of 91 special educators answered this question: 38 directors and specialists in State departments of education and 53 directors and supervisors in local school systems. All had some responsibility for the education of children with special health problems.

[3] Combined question to State personnel.

[4] Combined question to State personnel.

Additional Information on Professional Preparation Graphs 2 and 3

The opinions reported in graphs 2 and 3, page 75, indicate the *median* number of clock hours of specialized student teaching which special educators in the study believed to be "minimal," "desirable," and "ideal" for teachers preparing to work with children who are crippled or who have special health problems. Tables H and I show the wide range of opinions on this question.

Table H.—Opinions of special educators on the amount of student teaching with crippled children needed by those preparing to teach in this area

Clock hours	Percent [1] of personnel checking each amount needed by teacher-candidates with regular classroom experience with normal children				Percent [1] of personnel checking each amount needed by teacher-candidates with only student teaching of normal children			
	Teachers	State	Local	College	Teachers	State	Local	College
1	2	3	4	5	6	7	8	9
Minimal								
None	21	13	6	.....	7	6	1	8
1–75	45	50	51	48	22	34	18	28
76–150	25	25	41	32	41	36	63	36
151–225	5	10	.....	20	8	14	12	28
226–300	4	2	1	.....	22	8	6	.....
Over 300	.....	.....	.....	.....	.....	2	.....	.....
Desirable								
None	3	.....	.....	.....	.....	.....	.....	.....
1–75	16	17	9	.....	4	7	2	11
76–150	45	41	39	42	21	26	20	22
151–225	27	36	48	29	59	46	63	33
226–300	9	2	4	29	14	19	12	33
Over 300	.....	4	.....	.....	2	2	3	.....
Ideal								
None	3	.....	.....	.....	.....	.....	.....	.....
1–75	4	2	3	.....	2	.....	.....	.....
76–150	18	9	8	5	4	5	2	5
151–225	27	36	41	37	12	30	22	16
226–300	47	49	47	42	73	60	67	63
Over 300	.....	4	1	16	9	5	9	16

[1] Percents are based on the number answering in each category. Because of rounding off, unit percents do not always add to 100. A total of 208 special educators answered this question as a whole: 136 teachers, 30 directors and specialists in State departments of education, 32 directors and supervisors in local school systems, and 29 college staff members. All had some responsibility for the education of children who are crippled.

Table I.—Opinions of special educators on the amount of student teaching with children who have special health problems needed by those preparing to teach in this area

Clock hours	Percent [1] of personnel checking each amount needed by teacher-candidates with regular classroom experience with normal children				Percent [1] of personnel checking each amount needed by teacher-candidates with only student teaching of normal children			
	Teachers	State	Local	College	Teachers	State	Local	College
1	2	3	4	5	6	7	8	9
Minimal								
None	23	20	4	------	7	13	------	------
1–75	59	46	58	75	36	30	23	29
76–150	16	23	36	12	43	38	55	57
151–225	2	8	------	12	7	8	18	14
226–300	------	3	2	------	7	8	4	------
Over 300	------	------	------	------	------	3	------	------
Desirable								
None	4	------	------	------	2	------	------	------
1–75	23	24	7	12	9	12	------	17
76–150	46	35	48	50	30	24	24	------
151–225	25	33	40	------	49	49	57	33
226–300	2	5	5	38	9	12	14	50
Over 300	------	3	------	------	------	3	5	------
Ideal								
None	2	------	------	------	2	------	------	------
1–75	15	3	2	------	------	------	------	25
76–150	23	17	9	25	13	13	------	------
151–225	23	29	51	75	16	23	26	25
226–300	36	43	37	------	69	57	64	50
Over 300	------	8	------	------	------	7	10	------

[1] Percents are based on the number answering in each category. Because of rounding off, unit percents do not always add to 100. A total of 182 special educators answered this question as a whole: 72 teachers, 45 directors and specialists in State departments of education, 55 directors and supervisors in local school systems, and 10 college staff members. All had some responsibility for the education of children with special health problems.

Appendix D

Excerpts from Inquiry Form

I. Excerpts From Inquiry Form Filled Out by Teachers of Children Who Have Crippling Conditions

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

INQUIRY FOR EXC–4B: For Teachers of Children With Crippling Conditions

Miss
Mrs.

1.1 Your name Mr. _____ Date_____

1.2 Your mailing address_____

City (or Post Office)_____ State_____

1.3 Name and location of school in which you teach_____

_____

1.4 Indicate the type of school organization in which you teach by checking √ ONE of the following:

—— Special day school for crippled children only.
—— Special day school for various types of handicapped children.
—— Single multigrade special class for crippled children in a regular day school.
—— Center of two or more special classes for crippled children in a regular day school.
—— Hospital class.
—— Convalescent home class.
—— *Other* (specify):
—— Sanatorium class.
—— Residential school.
—— Home instruction.

1.5 Indicate the group or groups of crippled children which you teach by checking √ ONE or MORE of the following:

—— Nursery or Kindergarten —— Elementary —— Secondary

1.6 Indicate the period in which you took the *major* part of your specialized preparation which led to your initial certification or approval as a teacher of crippled children by checking √ ONE of the following:
—— Prior to December 31, 1945 —— Since January 1, 1946.

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

1.7 Indicate the number of pupils in your class by filling in the blanks:
—— Total number of pupils
Number of pupils with—
—— Infection due to poliomyelitis, tuberculosis of the bone, osteomyelitis and other diseases.
—— Congenital anomalies including club foot, spina bifida and other conditions.
—— Traumatic conditions including amputations, burns, fractures and other injuries.
—— Cerebral palsy.
—— Rheumatic fever and other cardiac conditions.
—— Miscellaneous crippling conditions, and conditions of unknown or uncertain cause.
—— *Other* (Specify type of crippling condition, special health problem or other physical handicap):

1.8 Indicate the plan by which you received the *major* part of your specialized preparation in the education of the crippled. (Place ONE check √ in the appropriate square in the table below AND if you have had additional preparation by other plans, indicate this by placing X's in ONE or MORE of the appropriate squares.)

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

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

3. In your *present* position—as a special class teacher of crippled children, hospital or sanatorium class teacher, or teacher of the homebound—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
				A knowledge and/or understanding of:			
----	----	----	----	3. 1 causes of the various types of crippling conditions such as poliomyelitis, cerebral palsy and scoliosis.	----	----	----
----	----	----	----	3. 2 the diagnosis, general plan of medical treatment and physical limitations of various types of crippling conditions.	----	----	----
----	----	----	----	3. 3 the implications of the diagnosis and prognosis of each crippled pupil.	----	----	----
----	----	----	----	3. 4 the major types of cerebral palsy, their distinctive characteristics and educational implications.	----	----	----
----	----	----	----	3. 5 medical and hospital terminology	----	----	----
				Ability—			
----	----	----	----	3. 98 to work with so-called normal children in helping them to accept the crippled child.	----	----	----
----	----	----	----	3. 99 to establish and maintain good working relationships with medical personnel, nurses, therapists, social workers, psychologists and guidance personnel.	----	----	----
----	----	----	----	3. 100 to work with vocational rehabilitation agencies in helping the child toward an occupational adjustment.	----	----	----
----	----	----	----	3. 101 to adjust to interruptions in the child's day for necessary physical therapy, treatment or rest.	----	----	----
----	----	----	----	3. 102 to play piano and develop and direct a rhythm band.	----	----	----
----	----	----	----	3. 103 to help the child, the classroom teacher and the parents in prepering for transfer from one type of school situation to another such as hospital class to special day school class, or from special class to regular class.	----	----	----

See footnote after item 5, page 110.

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

Very important	Important	Less important	Not important	Item[1]
----	----	----	----	5. 1 Supervised *student-teaching* of so-called normal children.
				Supervised student-teaching of crippled children—
----	----	----	----	5. 2 in special day schools or classes.
----	----	----	----	5. 3 in a residential school for crippled children.
----	----	----	----	5. 4 in hospital classes.
----	----	----	----	5. 5 in convalescent home classes.
----	----	----	----	5. 6 in home teaching services for crippled children.
----	----	----	----	5. 7 *other* (specify):
----	----	----	----	5. 8 at the nursery school level.
----	----	----	----	5. 9 at the elementary level.
----	----	----	----	5. 10 at the secondary level.
----	----	----	----	5. 11 *Student-observation* (without active participation) of teaching of crippled children.
				Planned observation—
----	----	----	----	5. 12 in cerebral palsy clinics.
----	----	----	----	5. 13 in rehabilitation centers for crippled children.
----	----	----	----	5. 14 in hospitals with facilities for crippled children.
----	----	----	----	5. 15 in convalescent homes with facilities for crippled children.
----	----	----	----	5. 16 in residential schools for crippled children.
----	----	----	----	5. 17 in day classes and/or schools for crippled children.
----	----	----	----	5. 18 in speech and hearing clinics.
----	----	----	----	5. 19 of conferences of on-the-job teachers of the crippled on pupil placement, curriculum adjustment, child study, etc.
				Planned observation—
----	----	----	----	5.20 of multiprofessional case conferences (held by representatives from such fields as medical, psychological, educational and social welfare) to study and make recommendations on individual crippled children.
----	----	----	----	5.21 Visits to the homes of crippled children in the company of supervising teachers.
				Planned visits to observe the work done by—
----	----	----	----	5.22 crippled children's agencies.
----	----	----	----	5.23 vocational rehabilitation agencies.
----	----	----	----	5.24 occupational therapists.
----	----	----	----	5.25 physical therapists.
----	----	----	----	5.26 speech correctionists.

See footnote after item 5, next page.

5. (Continued)

Very important	Important	Less important	Not important	Item[1]
				Experiences in drawing educational interpretations from—
----	----	----	----	5.27 medical reports.
----	----	----	----	5.28 psychological reports on crippled children.
----	----	----	----	5.29 reports of social workers on crippled children.
----	----	----	----	5.30 cumulative educational records on crippled children.

[1] All of the items which appear in table 1 were included in this question although not in the same order as in the table of the inquiry form.

6. Are there personal characteristics needed by a teacher of crippled children which are different in *degree* or *kind* from those needed by a teacher of so-called normal children?..... Yes____ No____
If your answer is "yes," please list and comment. (Attach an additional page if necessary.)

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

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

12. Indicate (1) the amount of *student-teaching* with crippled children that you believe should be *minimal, desirable* and *ideal* prerequisites for a teacher of the crippled, and (2) the amount of student teaching of crippled children you have had. (Check √ in *each* column on the *right* opposite the appropriate amount.

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

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

II. Excerpts From Inquiry Form Filled Out by Teachers of Children With Special Health Problems*

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

INQUIRY FORM EXC–41: For Teachers of Children With Special Health Problems*

Miss
Mrs.

1.1 Your name Mr. _____ Date _____

1.2 Your mailing address _____

City (or Post Office) _____

1.3 Name and address of school system in which you teach _____

_____

1.4 If you are assigned to teach in an institution other than a public school, give the name and address of this institution _____

_____

*Throughout the inquiry form, the term "special health problems" includes children with cardiac conditions, epilepsy, tuberculosis, and below-par or delicate conditions.

1.5 Indicate the type of educational program in which you teach by checking V ONE of the following:

—— Special day school for various types of exceptional children.
—— Special day school for children with special health problems only, i.e., open air school.
—— Single multigrade special class for children with special health problems in a regular day school.
—— Center of two or more special classes for children with special health problems in a regular day school.
—— Convalescent home class.
—— Home instruction program.
—— *Other* (specify):
—— Hospital class.
—— Sanitorium class.
—— Residential school.

1.6 Indicate levels of the group or groups of children with special health problems which you teach by checking ONE or MORE of the following:

—— Nursery or Kindergarten —— Elementary —— Secondary

1.7 Indicate the period in which you took the *major* part of your specialized preparation which led to your initial certification or approval as a teacher of children with special health problems by checking ONE of the following:

—— Prior to December 31, 1945. —— Since January 1, 1946.

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

1.8 Indicate by filling in the blanks:

—— Total number of pupils whom you teach.

Number of pupils with—

—— Cardiac condition resulting from rheumatic fever.
—— Cardiac condition resulting from other causes.
—— Nephritis and other kidney conditions.
—— Chronic illnesses (specify diagnoses if possible):
—— Epilepsy
—— Tuberculosis
—— Asthma
—— Diabetes
—— Malnutrition
—— Cosmetic defects
—— Arthritic conditions
—— *Others* (specify—types of special health problems, crippling conditions, or other physical handicaps):

1.9 Indicate the plan by which you received the *major* part of your specialized preparation in the education of children with special health problems.

(Place ONE check ✓ in the appropriate square in the table below AND if you have had additional preparation by other plans, indicate this by placing X's in ONE or MORE of the appropriate squares.)

Type of program		Prior to on-the-job teaching experience with so-called normal children		After on-the-job experience with so-called normal children	
Program offered at—	Level	Prior to teaching children with sp. h. probs.	Concurrently with teaching children h. probs.	Prior to teaching children with sp. h. probs.	Concurrently with teaching children h. probs.
An accredited [1] *college* or *university*, which consisted *largely* of work taken *during* the regular academic year.	Undergrad.				
	Grad.				
An accredited *college* or *university*, which consisted *largely* of summer sessions.	Undergrad.				
	Grad.				

Other (specify):

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

3. In your *present* position as a teacher of children with special health problems, 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
				A knowledge and/or understanding of: the causes, symptoms, diagnosis and general plan of medical treatment of—			
				3.1 cardiac conditions resulting from rheumatic fever and other causes.			
				3.2 epilepsy			
				3.3 tuberculosis			
				3.4 diabetes			

See footnote on p. 114

3. (Continued)

Very important	Important	Less important	Not important	Item [1]	Good	Fair	Not prepared
				3.5 other special health problems including nephritis, arthritis and asthma.			
				Ability—			
				3.80 to work with parents or personnel in the institution in maintaining good health habits of pupils, especially with respect to rest and nutrition.			
				3.81 to have a sympathetic but realistic appreciation of the parents' fears relative to their child's conditions.			
				3.82 to work with vocational rehabilitation agencies in helping the child toward an occupational adjustment.			
				3.83 to adjust to interruptions in the child's day for necessary medical treatment, observation and rest.			
				3.84 to remain objective while retaining sympathy and sensitivity.			
				3.85 to help the child, the classroom teacher and the parents in preparing for transfer from one type of school situation to another, such as from the hospital class to special day school class, or from a special class to a regular class.			

[1] All of the items which appear in table 1 were included in this question although not in the same order as in the inquiry form.

5. Do you consider the following experiences "very important," "important," "less important" or "not important" in the specialized preparation of teachers of children with special health problems? (Check ✓ ONE of the four columns on the *left* for each item.)

Very important	Important	Less important	Not important	Item
				5.1 Supervised *student-teaching* of so-called normal children.
				5.2 *Student-observation* (without active participation) of teaching of children with special health problems.
				Supervised student teaching of children with special health problems—
				5.3 at the nursery school level.
				5.4 at the elementary level.
				5.5 at the secondary level.
				5.6 in special day schools or classes.
				5.7 in hospital classes.
				5.8 in convalescent home classes.
				5.9 in sanatorium classes.
				5.10 in residential schools.
				5.11 in home instruction programs.
				5.12 *other* (specify):
				Planned observation of work done for children with special health problems—
				5.13 in medical clinics.
				5.14 in rehabilitation centers.
				5.15 in hospitals.
				5.16 in convalescent homes.
				5.17 in sanatoriums.
				5.18 in residential schools.
				5.19 in special day classes and/or schools.
				5.20 by the Crippled Children's Agency.
				5.21 by rehabilitation agencies.
				5.22 by occupational therapists.
				5.23 by physical therapists.
				Planned observation—
				5.24 of multiprofessional case conferences (held by representatives from such fields as medical, psychological, educational and social welfare) to study and make recommendations on individual children with special health problems.
				5.25 of conferences of on-the-job teachers of children with special health problems on pupil placement, curriculum adjustment, child study, etc.
				5.26 Visits to the homes of children with special health problems in the company of supervising teachers.

5. (Continued)

Very important	Important	Less important	Not important	Item
				Experiences in drawing interpretations from—
----	----	----	----	5.27 medical reports.
----	----	----	----	5.28 psychological reports.
----	----	----	----	5.29 reports of social workers.
----	----	----	----	5.30 cumulative educational records on children with special health problems.

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

11. Indicate (1) the amount of successful *classroom teaching* of so-called NORMAL children which you believe should be *minimal, desirable* and *ideal* prerequisites for a teacher of children with special health problems, and (2) the amount of teaching of so-called normal children which you have had. (Place ONE check ✓ in *each* column on the *right* opposite the appropriate amount.)

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

12. Indicate (1) the amount of *student-teaching* with children with sp. h. probs. that you believe should be *minimal, desirable* and *ideal* prerequisites for a teacher of children with sp. h. probs., and (2) the amount of *student-teaching* of these children which you have had. (Check ✓ in *each* column on the *right* opposite the appropriate amount.)

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

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

III. Excerpts From Inquiry Forms Filled Out by (A) Directors and Supervisors in State Department of Education, (B) Directors and Supervisors in Local School Systems, and (C) Instructors in Colleges and Universities Offering Specialized Preparation for Teachers of Exceptional Children.

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

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

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

Miss
Mrs.

1.1 Your name Mr._____Date_____

1.2 Your business address_____

City (or Post Office)_____State_____

1.3 Your official title_____

(*Specify*—Director of special education, etc.)

1.4 In which area or areas of special education do you have responsibility? (Check V as many as are applicable.)

—— Blind
—— Crippled [1]
—— Deaf
—— Gifted
—— Hard of Hearing
—— Mentally Retarded
—— Partially Seeing
—— Socially Maladjusted [2]
—— Special Health Problems [3]
—— Speech Defective

INQUIRY FORM EXC-2A: (Opinion Data) To be filled out by *All* Staff Members of Colleges and Universities Who Participate in the Specialized Preparation of Teachers of Exceptional Children

Miss
Mrs.

1.1 Your name Mr._____ Date_____

1.2 Official position_____
(Specify—Director of special education, demonstration teacher, etc.)

1.3 Official title_____
(Specify—Associate professor, graduate assistant, etc.)

1.4 College or university_____ City_____ State_____

1.6 In which area or areas of special education do you have *direct* administrative, instructional, and supervisory responsibilities? (Check ✓ as many as applicable.)

—— Blind
—— Crippled [1]
—— Deaf
—— Gifted
—— Hard of Hearing
—— Mentally Retarded
—— Partially Seeing
—— Socially Maladjusted [2]
—— Special Health Problems [3]
—— Speech Defective

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

FOR ALL THREE GROUPS OF EDUCATORS
(EXC-1, EXC-3 and EXC-2A)

Instructions: In answering special area questions throughout this form, please supply data on those areas in which you have responsibilities and, if you wish, in any additional areas in which you have professional preparation and experience.

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

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

Item	Blind	Crippled	Deaf	Other	Hard of hearing	Mentally retarded	Partially seeing	Socially maladjusted	Special health problems	Speech defective
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?										

[1] A sequence of specialized preparation involves 3 courses or at least 9 to 12 semester hours made up of (1) a study of the characteristics (physical, mental, and emotional) of the particular condition under consideration; (2) a study of the teaching methods and curriculum adjustments needed; and (3) observation and student-teaching in the specialized area. This definition 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 Adults, Inc., and the United States Office of Education) and has been adopted for use throughout this study.

4. (State Personnel, Continued)

Item	Blind	Crippled	Deaf	Gifted	Hard of hearing	Mentally retarded	Partially seeing	Socially maladjusted	Special health problems	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?										
4.15 Have these teachers been prepared to teach under rather ideal conditions and therefore lack the ability to fit into less-than-ideal special education programs such as unusual groupings?										
4.16 Do you believe that an abnormally high percentage of recently graduated special education teachers have "unsuitable" personality patterns?										
4.17 Do these teachers tend to have a "separatistic" attitude as far as the field of special education is concerned to the degree that they do not fit in with general educators?										
4.18 Are these teachers able to ascertain and to teach at the appropriate developmental levels of their pupils?										

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 seven years, have completed a sequence of specialized preparation [1] leading to initial certification or approval?

[1] 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.

4. (Local Personnel, Continued)

Answer the following questions for the areas in which you have responsibility by placing +, 0, or − in the respective columns for each area you complete, according to the following key:

+ = yes
0 = uncertain, undecided or no clear trend (half and half)
− = no

Item	Blind	Crippled	Deaf	Gifted	Hard of hearing	Mentally retarded	Partially seeing	Socially maladjusted	Special health problems	Speech defective
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?										

4. (Local Personnel, Continued)

Item	Blind	Crippled	Deaf	Gifted	Hard of hearing	Mentally retarded	Partially seeing	Socially maladjusted	Special health problems	Speech defective
4.15 Do these teachers have an adequate basic orientation to the education of various types of exceptional children?										
4.17 Do these teachers tend to teach at an appropriate level and not above or below the developmental levels of their pupils?										

5. (Completed by State, Local and College Personnel)
Please complete the following table:

Item	Blind	Crippled	Deaf	Gifted	Hard of hearing	Mentally retarded	Partially seeing	Socially maladjusted	Special health problems	Speech defective
5.1 Indicate the amount of successful classroom teaching with so-called *normal* children that you believe should be MINIMAL, DESIRABLE, and IDEAL prerequisites for a special education teacher-candidate. Answer by areas, by placing three letters, (M, D, and I) in each column you complete, according to the following key: M = minimal D = desirable I = ideal										
5.11 No teaching of normal children										
5.12 At least 1 semester of half-time student-teaching with normal children (or equivalent)										
5.13 At least 1 semester of full-time student-teaching with normal children (or equivalent)										
5.14 At least 1 year of on-the-job classroom teaching with normal children										

5. (State, Local, and College Personnel, Continued)

Item	Blind	Crippled	Deaf	Gifted	Hard of hearing	Mentally retarded	Partially seeing	Socially maladjusted	Special health problems	Speech defective
5.15 At least 2 years of on-the-job classroom teaching with normal children										
5.16 At least 3 years of on-the-job classroom teaching with normal children										
5.17 *Other* (specify)										
5.2 Indicate the amount of student-teaching with *exceptional children* which you believe should be MINIMAL, DESIRABLE, and IDEAL prerequisites for a special education teacher-candidate who is a successful regular classroom teacher. (Use the M, D, and I key as in item 5.1)										
No student-teaching in the specialized area										
1–75 clock hours [1]										
76–150 clock hours										
151–225 clock hours										
226–300 clock hours										
Other (specify)										
5.3 Indicate the amount of student-teaching with *exceptional children* which you believe should be MINIMAL, DESIRABLE, and IDEAL prerequisites for a special education teacher-candidate who has *only student-teaching with normal children.* (Use the M, D, and I key as in item 5.1.)										
No student-teaching in the specialized area										
1–75 clock hours										
76–150 clock hours										
151–225 clock hours										
226–330 clock hours										
Other (specify)										

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

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

M = Most likely to succeed

6. (State, Local, and College Personnel, Continued)

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

Item	Blind	Crippled	Deaf	Gifted	Hard of hearing	Mentally retarded	Partially seeing	Socially maladjusted	Special health problems	Speech defective
CANDIDATE A: A 4-year *undergraduate* program completed of specialized preparation (including student-teaching with normal and exceptional children) but *without* on-the-job teaching experience with *normal* or *exceptional* children										
CANDIDATE B: A 1-year *graduate* program completed of specialized preparation (including student-teaching in the specialized area) immediately following the completion of a bachelor's program in general teacher education, but *without* on-the-job teaching experience with *normal* or *exceptional* children										
CANDIDATE C: A 1-year graduate program completed of specialized preparation (including student-teaching in the specialized area), for experienced regular classroom teachers holding a bachelor's degree in general teacher education, and *with* on-the-job teaching experience with *normal* children only										
CANDIDATE D: No specialized teacher preparation but holding a bachelor's degree in general teacher education; *no* teaching experience with exceptional children, but *having* teaching experience with normal children										
CANDIDATE E: No specialized teacher preparation but holding a bachelor's degree in general teacher education (including student-teaching with normal children), but *without* on-the-job teaching experience with *normal* or *exceptional children*										
CANDIDATE F: No specialized teacher preparation at a college or university but holding a bachelor's degree in general teacher education; and *with* on-the-job teaching experience both with *normal* and with *exceptional* children in the specialized area										

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